# Military Intelligence
PROFESSIONAL BULLETIN

April-June 1998
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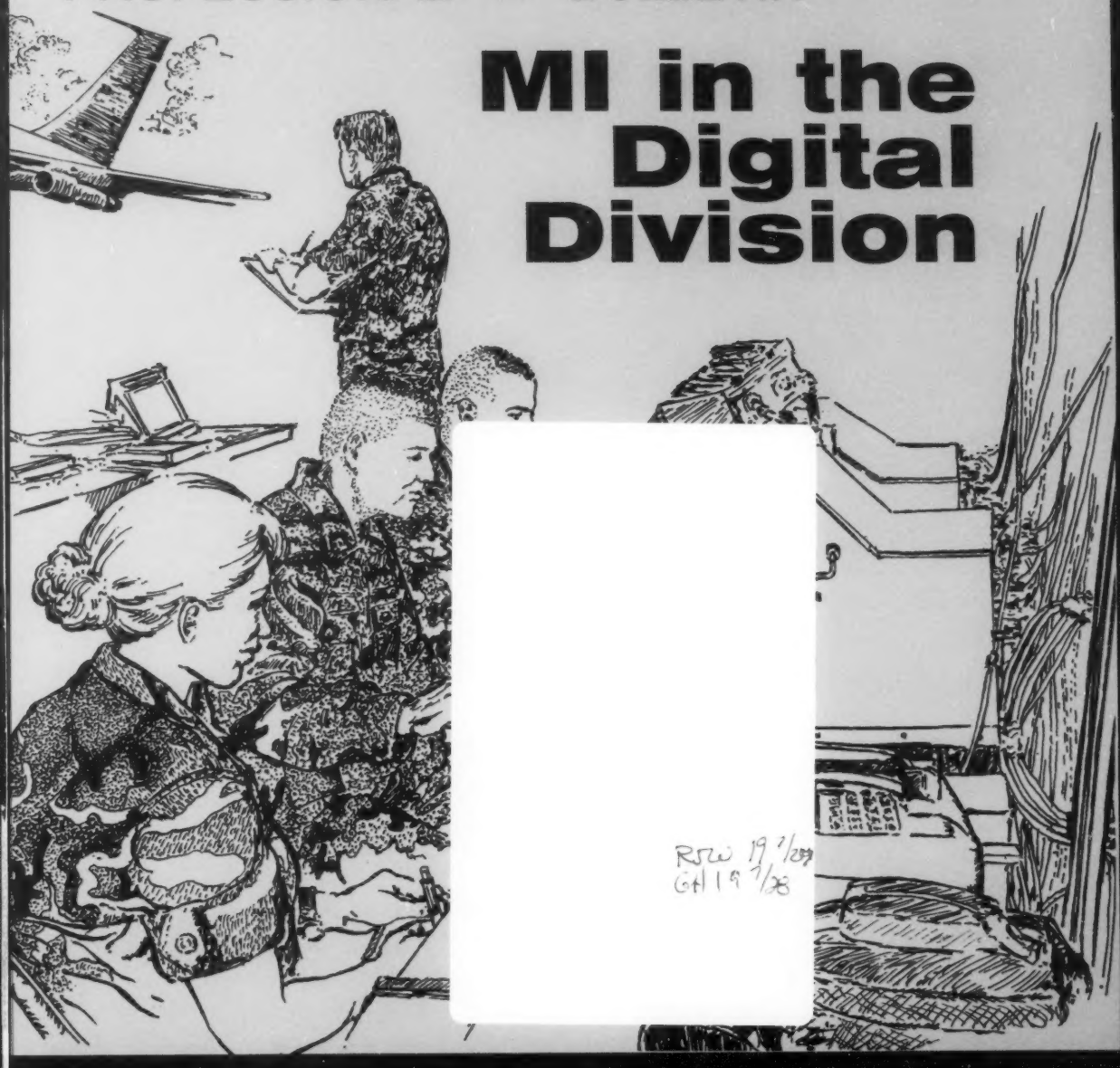
## MI in the Digital Division



# FROM THE EDITOR

This issue of the ***Military Intelligence Professional Bulletin*** discusses how MI conducts business in the digital arena. Acronyms such as AWE, BDA, and CTC-CMTC cover topics in detail that you just won't want to miss. Another "must read" is the exciting article on the capture of the indicted war criminal in "Operation Little Flower." Intelligence and teamwork—all the way!

We bid a fond farewell to Captain Jim Niemiec, ***MIPB*** Editor since August 1997. He is leaving the military to pursue personal goals by obtaining a law-business advanced degree. Best wishes in all your future endeavors!

Can't get your hands on a copy of ***MIPB***? Order your own personal hard copy (see page 27) or read the soft copy version for free when you visit the ***MIPB*** website. We are very excited about the changes we are implementing on our website. Our goal is to incorporate all ***MIPB*** issues—past and present—on the MIPB website, hyperlinked to references listed in the articles, for your viewing. The courtesy soft copy version can be found, in color, at http://huachuca-usaic.army.mil/contlearning/infrastructure/media/mipb/index.htm.

Articles Wanted! Share with us your questions, comments, knowledge and expertise! E-mail us at mipb@huachuca-emh1.army.mil. Let us know the subjects you want to read about in the ***MIPB***. It may be just a one-time article in an issue, or it could develop into a theme for an entire issue. There are many potential writers who can provide detailed information on almost any given topic in our field. The ***MIPB*** is a great way to reach people about events in our MI community, new technologies that are being employed (or those that should be), and lessons learned. We always enjoy sharing photographs of soldiers performing their missions, quality prints of the equipment they use, and informative "how to" articles or "quick tips." Listed below are the currently planned themes for future ***MIPB*** issues:

- ☐ Intelligence training.
- ☐ MI force modernization.
- ☐ Intelligence support to joint operations.
- ☐ Counterdrug, counterintelligence, and human intelligence operations.

Deborah A. English

## Writers of the Year and the Quarter

MIPB is pleased to announce the 1997 winners of the Writer of the Year awards. **Writer of the Year**: MAJ John Frank Lady III (USA, Ret.), "Directing Intelligence Operations IV: Intelligence Battle Command," Oct-Dec 1997. We have two **Runners-up**: CPT Harry E. Jones II, "Information Dominance for Army XXI: Battlefield Visualization," Jan-Mar 1997; and CPT Shawn C. Weed, "The S2's Ten Tenets for Success," Apr-Jun 1997. The **Honorable Mentions** are: CPT Frederic P. Filbert, "Keys to a Successful NTC Rotation," Apr-Jun 1997; and LTC John "Randy" Brooks (USA, Ret.), "The Results of the Task Force XXI Are In—Things Are A-Changin'," Jul-Sep 1997.

CPT Chris R. Lindstrom is our **Writer of the Quarter**, Apr-Jun 1998, for the article "The Corps-Level Forward Sensor Enclave: A Revolutionary Targeting Concept."

Congratulations to Frank Lady and all of the other winners and many thanks to all of our authors for their great articles, book reviews, and letters to the editor. Contributions like yours make ***MIPB*** the professional development forum for military intelligence professionals.

## How to Submit an Article

1. Select a relevant topic of interest to the military intelligence community. Plan to write 2000-3000 words, or roughly 3-5 pages.
2. Put the bottom line up front and write clear, concise introduction and conclusion paragraphs. Follow proper rules of grammar. Consult **DA Pamphlet 600-67, Effective Writing for Army Leaders**, or William A. McIntosh's **Guide to Effective Writing.**
3. Maintain the active voice as much as possible. Write "Congress cut the budget" rather than "the budget was cut by Congress."
4. Send the article in Microsoft Word or Word Perfect via E-mail to mipb@huachuca-emh1.army.mil or mail it to Commander, USAIC&FH, ATTN: ATZS-CLM (MIPB), Fort Huachuca, AZ 85613-6000. (Please do not use special document templates.) Include with your article—
   - ☐ Pictures, graphics, and crests with adequate descriptions and photographer credits. (We can return photos if so requested.)
   - ☐ A release by your local security office stating that your article is unclassified, nonsensitive, and releasable to the public.
   - ☐ A short biography with the full names of all authors of the article. The biography should include each author's current duty position, other assignments, civilian degrees, and advanced military education (CGSC, War College, SAMS, MSSI, SEIP, PGIP, etc.). (Tell us if we can print your telephone number and E-mail address with the biography.)
   - ☐ A cover letter with work, home, and E-mail addresses and telephone numbers, stating your wish to have the article published.
5. Remember, content is the most important part of your article. When in doubt, **send us your article**—we can work out the details!

# Military Intelligence

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**Purpose:** The U.S. Army Intelligence Center and Fort Huachuca (USAIC&FH) publishes the ***Military Intelligence Professional Bulletin*** quarterly under provisions of AR 25-30. ***Military Intelligence*** disseminates material designed to enhance individuals' knowledge of past, current, and emerging concepts, doctrine, material, training, and professional developments in the MI Corps.

**Submissions:** Please send your manuscripts, letters to the editor, photographs, and any inquiries to: Commander, USAIC&FH, ATTN: ATZS-CLM, Fort Huachuca, AZ 85613-6000, send via E-mail to mipb@huachuca-emh1.army.mil and an information copy to mcgoverne@huachuca-emh1.army.mil; or telephone (520) 538-1004/5 or DSN 879-1004/5.

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## FEATURES



## DEPARTMENTS



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04717

# VANTAGE POINT

**by Major General Charles W. Thomas**

By the time this article is in print, I will have reported to a new duty station and Major General John D. Thomas will be the Commander of the Intelligence Center and Fort Huachuca. He will bring a fresh perspective to intelligence and electronic warfare (IEW) operations in the future and provide the same great leadership to the MI Corps that he has to the U.S. Army Intelligence and Security Command (INSCOM) during the past three years.

Before departing, I wanted—as succinctly as possible and from my perspective—to outline where Army Intelligence is heading in terms of 21st Century military operations. Let's begin with potential future threats. I think most of us can agree that the likelihood of another conventional force-on-force conflict like Operation DESERT STORM is low. Analysts generally agree that the overmatch advantage of U.S. combat capability will preclude this scenario from a replay. The operative term here is "overmatch"—without it, what would prevent a regional power like Iraq or North Korea from exercising this type of military option? What is more likely to inflict many U.S. casualties—short of nuclear war—than a full-scale conventional warfight? It follows that conventional overmatch will be an essential element in any U.S. warfighting strategy, although this may be the least likely scenario we face.

Perhaps the most likely future action will be repetitive, humanitarian relief and peace support operations, low-intensity campaigns in complex terrain, or terrorist threats of mass destruction in urban areas of the United States. All are possible, even more probable than the conventional heavy-unit fights described earlier, but maybe not as likely to have as rapid or serious an impact on U.S. vital interests or to inflict the same level of heavy casualties. This laundry list of military possibilities leads me to the conclusion that we probably won't be able to do it all as well as we would like, so we ought to figure out our priorities and prepare for them as efficiently as possible.

I cannot overstate the need to retain our conventional fight overmatch. We must use some of our available forces to do this and employ others to handle lesser operations against peace support or low-intensity requirements—but all must have the capability for mutual support in any major commitment. I think this is the operational direction in which our nation and military are heading and it's necessary for the intelligence community to stay in step. That is what we've tried to do over the past several years through heavy involvement in the Army's experimental axis that includes advanced warfighting experiments (AWEs), Advanced Concept Technology Demonstrations (ACTDs), and participation in the Army After Next (AAN) wargaming process. These experiments and studies have given us venues with which to test concepts and systems like new versions of the All-Source Analysis System (ASAS), the Common Ground Station, Analysis and Control Team (ACT) Enclave, unmanned aerial vehicles (UAVs), Tactical Control Stations, Ground-Based Common Sensors, and others.

Now here's where I need to make an important observation: none of these systems are built as stand-alone collectors or processors. They have mutually supporting roles and all of the processors were designed to do only one thing: to make the analytic and presentation processes easier. They don't replace analysis, especially predictive analysis; they augment it. They provide more science to the art of analysis and decisionmaking. This said, remember that trained and ready MI soldiers who can collect and process (includes analysis) effectively remain the essential element for success in our business. We have redesigned the training system at Fort Huachuca to accommodate this requirement. In addition, we're building a force structure that can incrementally adjust to handle changing threats, technologies, and resource realities.

This means a force structure that uses resources from space to mud—a tactical force that's only large enough to satisfy a combat commander's needs for organic support. It can reach back for the rest—perhaps to an INSCOM organization that provides counterintelligence and human intelligence (CI/HUMINT) support, leverages a purpose-built National Security Agency resource to satisfy an operational need, or to a Defense Intelligence Agency database to provide context to a G2 estimate. We can do some of this now—and the experimental axis we are on with the larger Army is helping us to understand and plan to do it even better in the future.

This is where you, the "field," come into play. You have a critical role in vetting this process—the individual pieces and the whole architecture. If you have better ideas about how we should handle and resource tactical CI or signals intelligence missions, for example, let us know. However, I offer one suggestion: never make the mistake of assuming that there are a lot of wholly new ideas out there. Many smart MI professionals have gone before us and

there's not much that hasn't been tried. What we must do is to learn from the past and package new technologies with new concepts and the right employment tactics. Then we test, modify our TTP (tactics, techniques, and procedures), bounce it all against resource realities, change doctrine, and train soldiers to use it all.

From all this emerges an architecture and a force structure. By the way, it is a force structure that must include the Reserve Component more comprehensively than ever before. The emerging architecture is integrated thoroughly with the Army's tactical command and control system and the joint community---and with our allies as much as possible. None of this is simple or error free, but whatever force structure emerges must truly be tailorable and modular. I believe our A-series Tables of Organization and Equipment (TO&Es) have us moving in that direction. Experimental efforts and studies are helping us decide just how much of each intelligence and EW function needs to be done at each level of command, from company to joint force commander. This is an evolutionary thing that we do. To attempt a "revolutionary" leap could easily send us spinning off into a void not filled by the larger Army or reality. Still, despite the errors inherent in any anticipatory change, I believe we are moving in the right direction.

Real future challenges remain in determining MI's role in this concept we call information operations, and in determining what we need and can afford in terms of new technologies that truly enhance the human dimension of warfighting. I am convinced that the only way to begin to understand these things is to build that which we have always lacked in the Army: realistic simulations that provide the level of detail to genuinely replicate MI systems and processes in exercises and experiments. Extant simulations like the Battlefield Intelligence Collection Model (BICM) and Tactical Simulation (TACSIM) do not provide the resolution necessary to do this. I believe initiatives like the Combat Synthetic Training Assessment Range (Combat STAR), FIRESTORM (Federation of Intelligence, Reconnaissance, Surveillance and Targeting Operations and Research Models), and the IEW Tactical Proficiency Trainer (IEWTPT) are moving us in the right direction. From them will emerge the functions we need in the Warfare Simulation (WARSIM) Intelligence Module (WIM). The fact is, however, that until we can realistically drive the battle command process with high-fidelity intelligence processes, commanders will not understand the true value and limitations of the intelligence system and we will have hard time arguing for new concepts and systems. Our simulations development initiatives must remain a very high priority, and they must include the least automated of the intelligence functions, CI and HUMINT.

Let me conclude, for now, by reminding you that ours is a most demanding profession---but one full of rewards for professionals who understand the nature of conflicts as they evolve and what we can do to prevent them or win them. Neither happens without the kind of intelligence that makes U.S. combat power effective at every level of command. That is our job, I'm proud of the way we do it, and equally proud of the way we are deliberately learning to do it better.

**ALWAYS OUT FRONT!**

# CSM FORUM

**by Command Sergeant Major Randolph Hollingsworth**

As I prepare to close this chapter of my life and start a new one as a retired soldier, I can only think of one word to say: "Thanks!" Thanks for the professionalism, caring, and mentoring of so many great Americans. I leave the Army and the MI Corps knowing that I was never alone. There were and are so many soldiers who shared the road of life with me. Each time I made a recommendation or decision, or fired my weapon, there was always a hand or voice of assurance that told me if I was right or wrong.

Those voices, harsh at times, and those hands, firm yet gentle, helped me to grow from a 19-year old to a mature and, at times (I like to think), a wise old man. Those voices and hands belong to men and women who were sergeants, warrant officers, commissioned officers, and civilians. The outstanding quality that they all have in common is that they care more about our country, our Army, and their soldiers than they care about themselves. I was truly fortunate to experience that caring through excellent training, discipline, the enforcement of standards, and the setting of individual and team goals.

My career would not be complete if names like Lena, Zanders, Retter, Castro, McNamara, Huskin, Heaney, Thomas, McLaughin, Williamson, Stevens, Daf, Suzette, Roberson, Young, Smith, Lupe, and Jones were not in my book. These soldiers and

*(Continued on page 61)*

# Intelligence in the Division AWE: A Winner for the Next Millennium

**by Major General William S. Wallace and Lieutenant Colonel William J. Tait, Jr.**

***I know more about the enemy than I do about us!***

**—Commander, 4ID(M), during the DAWE in November 1997**

Commanders in the 4th Infantry Division (Mechanized) (4ID(M))—the Army's Experimental Force (EXFOR)—enjoyed an unprecedented awareness of the enemy situation during the Division Advanced Warfighting Experiment (DAWE) held at Fort Hood, Texas, from 5 through 13 November 1997. This advancement bodes well for the Army—now and in the future—and resulted from a combination of factors:

- ☐ Collectors and processors based on 21st Century technology.
- ☐ A new and effective organizational design for intelligence support to the heavy division.
- ☐ Updated intelligence tactics, techniques, and procedures (TTP) based on sound current doctrine.
- ☐ Motivated, well-trained intelligence personnel.

This article addresses some initial insights related to each of those subjects. It is important to stress the emerging nature of these DAWE impressions, because the lessons learned are still being captured and their implications are under study. Although insights continue to emerge and are the most important benefit of the experiment, the tactical results are clear. If you were to advertise them on a very large bumper sticker, it might say: "The EXFOR Division killed more than twice the enemy, in half the time, over three times the battlespace, with 25 percent fewer combat platforms using information age technology." The pride evident in that declaration of victory is but a glimmer of the energy and triumph that characterized the DAWE. It was an exciting event from every perspective, but no battlefield functional area (BFA) was more dynamic or successful than intelligence. There is no way to convey all of the major intelligence accomplishments in this article, so we will focus on the factors mentioned earlier. First, it is appropriate to look at what the DAWE was and how intelligence fit into the experiment.

## DAWE and the Intelligence BFA

The DAWE was the next step after the Task Force XXI (TF XXI) AWE, conducted in March 1997 at the National Training Center (NTC). Whereas the TF XXI AWE focused on a Brigade Combat Team (BCT) maneuvering live forces and employing actual sensors and other systems, the DAWE was a simulation-based, command-post (CP) event focused on division operations in the year 2003. This put the onus on the Battle Command Battle Lab-Huachuca to develop a robust simulation driver for intelligence. The result was FIRESTORM (the Federation of Intelligence, Reconnaissance, Surveillance, Targeting, and Operational Research Models), which, after developmental challenges during our early ramp-up exercises, performed outstandingly well during the final ramp-up and the actual DAWE.

One way to think of the DAWE is as a super, 21st Century Battle Command Training Program (BCTP) Warfighter Exercise. In that regard, the nine-day experiment was the longest Warfighter Exercise in BCTP history. BCTP senior observers and observer/controllers (O/Cs) played fundamental roles in the exercise but were joined by a multitude of subject matter experts including an intelligence team led by Major General Charles Thomas, Chief of the MI Corps and Commander, U.S. Army Intelligence Center and Fort Huachuca (USAIC&FH).

**The concept of a division conducting multiple, simultaneous combat operations over such an extended battlespace has major implications for intelligence**

The scenario for the exercise placed the division in a mid-intensity type of conflict on the notional continent of "Lantica." This island continent had terrain and weather patterned after that in Europe. The 4ID(M) was the III Corps' initial entry force in a combined forces campaign against the Bisdon Axis. The division covered the deployment of III Corps into the area of operations, then

fought a series of rapid, violent engagements to defeat the enemy. The division's battlespace was 240 by 540 kilometers during much of the operation—typically the area assigned to a corps. The concept of a division conducting multiple, simultaneous combat operations over such an extended battlespace has major implications for intelligence.

Such an environment requires autonomous intelligence support to the maneuver brigades while collaboratively orchestrating the entire division collection and analytical effort. For an in-depth look at the background of intelligence in the AWEs, see the article by the previous Division G2 and 104th MI Battalion Commander in the April-June 1996 issue of the ***Military Intelligence Professional Bulletin***.

## Intelligence Systems—All Winners

The situational awareness of the enemy that we enjoyed throughout the experiment convinced us that all of the intelligence systems involved in the exercise are winners. We briefed that to key decisionmakers and advocated increasing the number of intelligence systems, which are considered Priority 1. Currently, only the All-Source Analysis System (ASAS) is so designated.

The division used a robust suite of 21st Century collectors during the DAWE that transcended the Intelligence BFA and gave us information dominance. Of the more than 70 systems involved in the experiment, more than one-fourth had intelligence applications. The intelligence-specific collectors were the:

- ☐ Joint tactical unmanned aerial vehicles (UAVs) with the short-range (Hunter) and close-range (Outrider) aircraft.
- ☐ Intelligence Electronic Warfare Common Sensor (IEWCS)—Advanced QUICKFIX (AQF) and Ground-Based Common Sensor (GBCS).
- ☐ Common Ground Station (CGS) to receive Joint Surveillance Target Attack Radar System (Joint STARS) data and AN/TPQ-37 Firefinder counterfire radar acquisitions.
- ☐ Counterintelligence (CI) teams.
- ☐ Interrogation teams.

Other important divisional sensors included the Apache Longbow and Comanche helicopters, the future scout combat systems, Sentinel air defense artillery radars, AN/TPQ-36/37 Firefinder radars, Raptor minefields and Fox NBC (nuclear, biological, and chemical) reconnaissance vehicles. Traditional human reconnaissance, conducted by the division's air and ground scouts, also proved invaluable (gizmos are wonderful but cannot do it all). Corps and higher-echelon assets supporting the division included the third IEWCS system—Guardrail Common Sensor (GRCS), Joint STARS, additional short-range (Hunter) UAVs, Predator UAVs, long-range surveillance (LRS) teams, special operations forces (SOF) teams, and a full complement of overhead theater and national signals intelligence (SIGINT) and imagery intelligence (IMINT) assets.

Although all collectors were critical to Force XXI operations, two sensors emerged as unparalleled combat multipliers—Joint STARS and the UAVs. The generic value of these key systems has been recognized for some time and has been discussed previously in this publication, including in an article by the then 1st Cavalry Division Commander and G2 in the October-December 1997 edition of ***MIPB***. What the DAWE showed was the **potential** of Joint STARS and UAVs with improved, 21st Century capabilities, particularly when their benefits are extended down to maneuver brigade level and lower echelons.

During the DAWE, Joint STARS collected 24 hours a day and provided significant coverage of our battlespace. As a result, the CGS displays of Joint STARS moving target indicators (MTIs) at the Division main CP (D-MAIN), the division tactical command post (TAC1), and each maneuver brigade were usually the centers of attention. In fact, the division command group and brigade commanders frequently monitored and conducted the fight using the CGS displays. Joint STARS and other sensors cued the UAVs to perform specific situation development, targeting, and battle damage assessment (BDA) missions. The division had one baseline of Hunter tactical UAVs, which allowed us to keep a platform in the air 20 hours a day. During part of the experiment, III Corps provided a second Hunter UAV baseline to reinforce us as the main effort. Each maneuver brigade had a baseline of Outrider UAVs, which provided 16 hours of coverage daily.

One initial insight from the DAWE is that there was an overreliance on Joint STARS and the UAVs. This was particularly true early in the exercise but decreased somewhat after adverse weather grounded the UAVs (proving the importance of other sensors), the BCTP World Class Opposing Force (WCOPFOR) adjusted its TTP in an attempt to "fool" Joint STARS, and when the enemy was static while defending. Consequently, we learned that there are three pitfalls related to Joint STARS and UAVs that commanders should avoid:

- ☐ Relying on only two systems when many more are available.
- ☐ Basing decisions solely on their own analysis without considering analysis performed by supporting intelligence personnel.
- ☐ Dynamically retasking their UAVs on a continual basis.

The system used to process the information derived from so many collectors was ASAS. The primary ASAS system used was the ASAS Remote Workstation Version 3 (ASAS-RWSv3). Additionally, ASAS Block I ("Mother ASAS") was used at the Analy-

sis and Control Element (ACE) in the D-MAIN. ASAS-RWSv3 proved to be a viable tool for intelligence analysts at all levels. It effectively facilitated the creation and maintenance of the "Red" portion of the relevant common picture. It also holds great promise as a tool for managing intelligence operations and displaying the enemy situation and other information for commanders and staffs. Enhanced intelligence preparation of the battlefield, collection management tools, and automated BDA, are ways in which the power of the ASAS-RWSv3 can be unleashed. Perhaps the most important capability planned for ASAS-RWSv3—as with other Army Tactical Command and Control Systems (ATCCS)—is as an onboard collaborative tool featuring videoteleconferencing (VTC), a digital "white board," audio, and chat functions. Interoperability among the ATCCS systems continues to improve, and ASAS is leading the way as the oldest sibling in the ATCCS family.

## Organizing Intelligence Support for the 21st Century

The organizational design for intelligence support to the division was another critical factor in the success of DAWE. This manifested itself in many ways, three of which will be discussed here—direct support (DS) MI companies for maneuver brigades, merging the G2/S2 and MI battalion cells into intelligence teams at every CP, and tactically tailoring intelligence personnel to perform unique functions such as BDA and collection management. The 104th MI Battalion is organized with a headquarters and headquarters service company, three DS MI companies, and a general support (GS) company (see Figure 1).

Employment of the DS MI companies with maneuver brigades is not a new concept, but deploying them with the brigades' organic Analysis and Control Teams (ACTs), CGSs, and UAVs is revolutionary. These outfits give the BCT commanders the ability to see deep with their own assets and the analytical power to accurately assess the voluminous information collected by those means. The most important reason that the digitized division is able to successfully prosecute the multiple, simultaneous operations mentioned earlier is the advent of the highly capable DS MI companies deployed with the BCTs across the division's extensive battlespace. This allows division-level collectors and analysts to focus on current shaping operations and future plans.

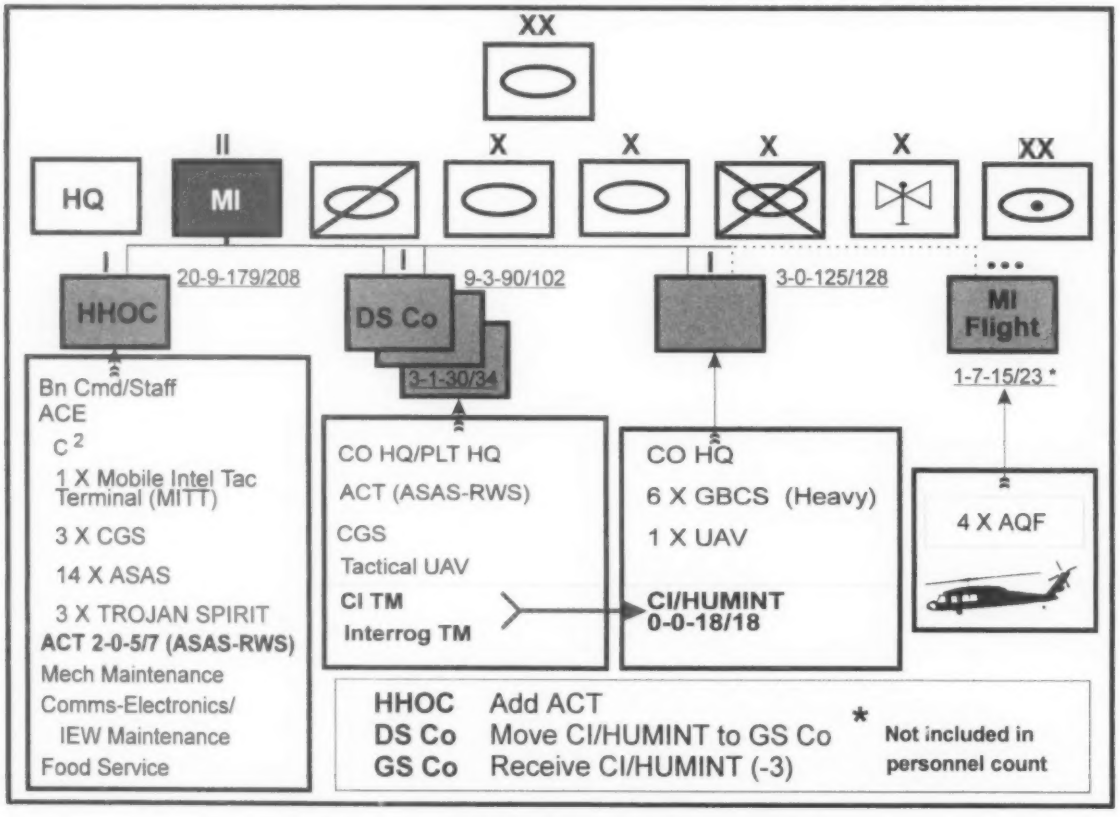


**Figure 1. Force XXI Heavy Division Interim Design.**

The EXFOR Division's austere personnel resources and demand for synergy, both horizontal and vertical, caused the G2 and S2 sections and supporting MI battalion personnel in the division and brigade CPs to merge into highly efficient intelligence teams. At the D-MAIN, the G2 section and the ACE were one; at the TAC1, the G2 cell joined with the Intelligence Support Team from the ACE (then called the ACE Forward) and the MI Battalion Operations Center (BOC); and at each brigade CP, the S2 section and ACT merged. The effectiveness generated by "taking down the walls" cannot be overstated.

The importance of tactical tailoring as an intelligence principle was proven during the DAWE. Perhaps the best illustration of this was the formation of an out-of-hide BDA cell at the ACE. Created to perform BDA in an analog fashion in the absence of digital enablers, this cell generated the most timely and accurate BDA ever achieved during a BCTP Warfighter Exercise, according to the senior observers and O/Cs. This was essential because many priority intelligence requirements (PIR) were based on the BDA and drove critical decisions. Presumably, this ad hoc BDA team will be unnecessary once the function is automated. Tactically tailoring both the collection management and systems management efforts achieved similar successes.

## Intelligence Doctrine and Force XXI TTP

It was our belief coming out of the DAWE that the Army's intelligence doctrine, and indeed most Army doctrine in general, was proven sound by the experiment. However, the revolutionary 21st Century intelligence TTP that emerged from the DAWE—best illustrated by the "Virtual ACE" concept—have major implications for applying that doctrine.

Our conclusion that intelligence doctrine is sound was confirmed during a post-DAWE conference hosted by the USAIC&FH at Fort Huachuca 13 through 15 January 1998. Besides essential intelligence personnel from the 4ID(M), participants at this "FM 34-1[1]/ DAWE" mini-conference included subject matter experts from both the Intelligence Center and the BCTP, and key intelligence leaders. Led by then Colonel Nicholas Grant, who was the III Corps G2, the conference highlighted the importance of two concepts developed by the EXFOR for the DAWE—the Virtual ACE and intelligence orchestration.

The Virtual ACE is a powerful method of conducting collaborative intelligence analysis across the division. It was so successful in the DAWE that it entered the lexicon of the Army Chief of Staff, was a key topic in the Training and Doctrine Command's **DAWE Initial Insights Report**, and is under discussion as the basis for a "Virtual Staff" concept in future exercises. The Virtual ACE optimizes collection and analytical resources, ensuring the most timely and accurate relevant common picture (RCP) of the enemy at each CP. The basic premise is that all of the analysts in the division are part of the ACE despite their assigned locations. It is a highly collaborative process, with both the analysts and leaders using VTCs, digital white boards, audio links, chat functions, and more traditional communications means to refine their analysis.

**Synchronization implies a coordinated plan...orchestration recognizes dynamic and innovative adjustments that allow commanders to anticipate and seize opportunities**

The intelligence team at each level uses ASAS-RWSv3 to develop the enemy RCP for its battlespace, which is then accepted by its higher headquarters. These RCPs are in the form of dynamically distributed overlays (DDOs) "shared" among ASAS workstations over the Mobile Subscriber Equipment (MSE) network and other communications "pipes." This dynamic exchange of highly focused intelligence results in optimal analytical support to commanders at every echelon.

"Orchestration" is an appropriate name for the way we managed intelligence operations during the DAWE. The concept of orchestration goes beyond the existing intelligence principle of synchronization (**FM 34-1**[1]) and is in line with the final draft of the new **FM 100-5**, **Operations**. Intelligence orchestration aptly describes the art and science of focusing scarce collection and analytical resources at the right times and places to maximize intelligence support to commanders.

While synchronization implies developing a coordinated plan that is reflected on a matrix and executed by the numbers, orchestration recognizes that dynamic and innovative adjustments to the plan will allow commanders to anticipate and seize opportunities. One example of orchestration was intelligence handover. Traditionally and by doctrine, we establish an intelligence handover line to delineate responsibility for collection between echelons. In the DAWE, intelligence handover was oriented with one or more of four factors—unit, terrain, time, or capability, not on a line.

## Trained and Ready Intelligence Personnel Made the Difference

One of the great success stories of the DAWE was the division intelligence team that came together and made the experiment work. When the DAWE process began in June 1997, the Division G2 and 104th MI Battalion Commander were both newly assigned and there was a critical shortage of intelligence personnel throughout the division. To exacerbate the problem, new systems and software

versions meant that nearly all soldiers were untrained. By the final ramp-up exercise in September, an effective, well-trained team consisting of permanently assigned soldiers and nearly 40 augmentees was ready. They excelled in both the final ramp-up and the DAWE itself.

The augmentees who joined the division for the experiment were critically important. The vast majority of the enlisted augmentees—more than 30—came from Fort Huachuca and comprised a mix of AIT students and instructors. Most of them were employed as intelligence analysts, operating ASAS workstations. Others, primarily officers, came from units at Fort Hood and elsewhere; they served in key positions such as G2 operations officers. The validity of the experiment depended on these augmentees because they filled out the organizational design and operated many of the systems upon which the experiment was based.

The training program that prepared the division intelligence team for the DAWE epitomized the cooperation that exists between the division and USAIC&FH. Several systems required training, including the CGS, UAV, and ASAS-RWSv3. By far the most challenging training was that required for ASAS-RWSv3. Nearly 150 individuals trained to operate and supervise the 49 ASAS-RWSv3 workstations used by the Division in the DAWE. The course was six weeks long and sessions were conducted at both Fort Hood and Fort Huachuca.

The intelligence professionals who made the DAWE so successful were not just the "players" assigned to or augmenting the 4ID(M) and other III Corps units. They also included representatives of many other organizations ranging from the Battle Command Battle Lab-Huachuca folks who stayed at Fort Hood for five months to contractors from many companies.

## What's Next?

The DAWE is already having an impact on intelligence systems, organizational design, doctrine, and training. Based on the lessons learned from the DAWE, the ASAS-RWS is undergoing update, and there is recognition that the number and range of UAVs supporting the division requires careful consideration. By the time this article is published, the heavy division will be redesigned and a decision on its organization will have been made. The 4ID(M) will begin transitioning to that design immediately, another step in becoming the Army's first digitized division by fiscal year 2000. It appears now that the MI battalion design will remain similar to its organization during the DAWE, with perhaps an additional ACT to support the Aviation Brigade as a fourth maneuver brigade and/or the divisional cavalry squadron.

In terms of doctrine, the final draft of **FM 100-5** was shaped by two things. They are the DAWE process and USAIC&FH plans to incorporate the Virtual ACE, intelligence orchestration, and intelligence handover concepts discussed here in the next version of **FM 34-1**.

In the division, we now have a quarterly "Digital AIT" course. It teaches our newly assigned personnel how to operate the ASAS-RWSv3 plus periodic sustainment training to keep operators current on the system.

The momentum that the division intelligence team developed during the DAWE will build in the months ahead. The 4ID(M) will continue to move toward becoming the Army's first digitized division and to conduct future exercises and experimentation.

## Conclusion

The role of intelligence in the DAWE was clearly unsurpassed in importance by any other BFA. The innovative advancements made by a team of great intelligence professionals before the DAWE, and the lessons learned from their outstanding performance during the experiment, will serve our Army well as it enters the next millennium.

**Endnote**

1. **FM 34-1** is titled **Intelligence and Electronic Warfare Operations.**

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### Address Verification

Due to new postal regulations, we are updating our mailing lists for ***MIPB***. The Post Office now requires building numbers, street addresses, and nine-digit zip codes. APO addresses should include unit box, and CMR number as appropriate. Other overseas or non-U.S. addresses should be complete, includung postal and country codes and names. Please review and update your mailing label. If your address is not correct or is incomplete, please notify us by E-mail at martinezc@huachuca-emh1.army.mil with subject heading "Address Update." Please include both your incorrect (copy it exactly from the label) and correct address. You can also contact us at commercial (520) 538-1015 or DSN 879-1015.

# The Digital Planning Process: Lessons Learned from the AWEs

**by Major Michael A. LaChance**

*No one plans to fail-----but many fail to plan.*

—Anonymous

The Army's Advanced Warfighting Experiments (AWEs) in digitization, conducted from March through November 1997, demonstrated the lethality of the modern division on the future battlefield. The results were clear. No other army can **execute** combat operations with the speed, precision, and lethality of the Force XXI Division. Unfortunately, the mighty Force XXI Division does have an Achilles heel—the planning process.

In a perfect world, the planning process is relevant, dynamic, and responsive to the changing nature of the battlefield. The commander relies on his planners to project the current situation into the future and to develop a synchronized plan to defeat the enemy. Naturally, the plan will only be as good as the planners' ability to develop, synchronize, and coordinate its transition to execution. On today's digital battlefield, the planner still relies heavily on a largely manual planning system. Not much has changed for the planner since the beginning of warfare. With the exception of the **situational awareness** and the **Battlefield Planning Visualization (BPV) System** (discussed in detail below), the Army's current inventory of planning tools lags behind its development of command and control systems. We, the collective Army, must do a better job of planning to plan.

## The Process

The AWEs reaffirmed the Army's planning doctrine in the current version of **FM 101-5, Staff Organization and Operations**. It was a solid point of reference from which all planning emanated. New tactics, techniques, and procedures (TTP) were developed to accommodate the various digitization steps along the way. The techniques and procedures to meet the intent of our doctrine have changed.

## A Vacuum Without Attachments

The dichotomy of the quasi-automated planning and digital execution during the AWEs created a literal and figurative execution vacuum. What is worse, the Army had a vacuum without all the necessary attachments! There was no planner's toolbox attachment to the Army Tactical Command and Control System (ATCCS) when we bought the system. The execution vacuum drew the planners closer and closer to the current fight and thereby denied them the crucial time needed to plan and develop future operations.

During the AWEs, the overarching goal of the planners was to "get inside the enemy's decision cycle" and shape the battlespace to our advantage, thereby denying the enemy a favorable course of action (COA) and allowing maximum flexibility for our units. The situational awareness and common relevant picture offered by the ATCCS was a double-edged sword when it came to planning. The commander "knew" with certainty the current situation. Armed with that certainty, the commander was able to discern tactical advantages, but needed to synchronize the next fight's actions. The result was a daily synchronization meeting that challenged the ability of the planners to maintain a vision beyond the 48-hour timeframe (one fight deep). The detailed synchronization of the next fight compelled the planners to "work" the current plan through execution (synchronizing the current plan) rather than shaping the future enemy situation for the fight after next (shaping the battle). Planners struggled to retain the planning edge offered by situational awareness while dealing with the obvious need to synchronize current operations and their subsequent fragmentary orders (FRAGOs). From a planning perspective, planning was secondary to execution. It is the chicken and egg argument: which came first—a good plan or good execution?

The tactical advantages offered by situational awareness will only last as long as we fight an enemy without a digital capability similar to our own. We currently lead the way in this capability. Over time, the enemy will also achieve this ability. The advantage will then go to the army that can more rapidly exploit its enemy's weaknesses revealed by situational awareness. Ergo, we must develop more integrated and timely planning processes and tools.

During the AWEs, planning was so intensive with so little time between conception and execution that the planners were often drawn into "synchronizing" and changing the "current" plan as close as 12 hours before its start, but were rarely able to develop a "new" plan beyond 48 hours away. The intensity of the planning system preempted more than a single sequel at a time, and that sequel needed refinement right up to execution. Thus the execution vacuum sucked the planners into its clutches, and denied them the ability to develop a well-thought-out plan and hindered their analysis of the enemy's COAs beyond 24 to 48 hours.

This paper could argue the merit of reactivity, flexibility versus

planning, but that is not the intent. The point is raised simply to emphasize that the winner on tomorrow's battlefield will be the army that is not only capable of exploiting a weakness, but capable of planning, creating, and shaping a weakness.

## Tools of the Trade

**All-Source Analysis System** (ASAS). As noted earlier, the major advantage offered to the planner by the ATCCS is the concept of a shared relevant common picture of the current battlefield. As the intelligence planner, I relied heavily on the ASAS. The system does have some rudimentary planning tools including:

- ☐ Three-dimensional (3D) perspective of terrain.
- ☐ Ability to display military graphics on a two-dimensional (2D) map in overlay format.
- ☐ Database of enemy units.
- ☐ Built-in web browser.
- ☐ Chat capability.
- ☐ Most importantly, an excellent integration and display of the current situation.

ASAS provided me with the starting point for all plans. We had already manually entered the order of battle (OB) in the database, a tedious job, and we were in contact with the enemy. As the G2 Plans officer, I would verify, validate, and confirm the existence of all the elements anticipated to affect the future battles. The current situation was then exported from ASAS (at icon-entity level) to the BPV system. The G2 Planner was then able to see the current situation with crystal clarity; this allowed us, in conjunction with the Analysis and Control Element (ACE), to more accurately project, analyze, and predict future enemy COAs. ASAS provided the starting data on the enemy. The web - browser allowed us to tap the many hypertext links available on several servers. This capability was invaluable as a "virtual" library. We were able to call the analysts and chat with them or to call up their overlays if we had q. stions.

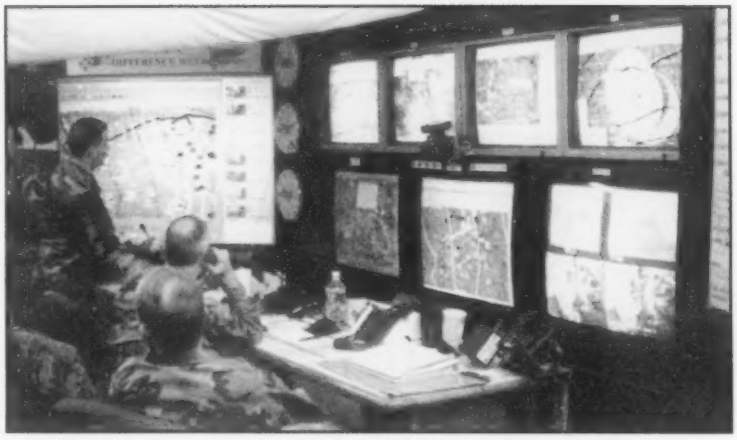

Photo by SPC Kap Kim

The Pit: Bazannini (AOC-M) area in TAC 1 during the DAWE.

The **Maneuver Control System**. MCS, like ASAS, provides critical starting data and graphics on all friendly or "Blue" units , and has many of the same tools that ASAS has for the enemy forces. The only additional tool in the MCS for intelligence planners is the distributed operations order (OPORD). The MCS icon-level units and graphics were exported to the BPV. The distributed OPORD tool, although good in concept, was quirky; we had to use many workarounds to make it effective. Once the OPORD had been written in plain text format using Microsoft Word[1] and Excel, the G3 planners still had to format and send the document via E-mail to all the units. It is also important to note that the collection manager used MCS in conjunction with the BPV (see page 16) to develop the collection plan. MCS, unlike ASAS, was able to receive data from the BPV. This helped enormously as we tried to integrate the planning process. The Blue units' data and graphics could be exported and imported with ease; thus, changes made during the wargame were easily translated back to the MCS.

**Battlefield Planning and Visualization System**. The BPV (a UNIX-based Silicon Graphics Octane processor) was the mainstay of the intelligence planning process (see Figure 1). It provided planners with the unique capability of moving unit icons on 3D and 2D terrain models while simultaneously showing OBs to the entity level, ground and aerial range fans, anticipated effects, battlefield conditions, routes, graphics, attrition, and most importantly, a visual representation of intent. All COAs could be saved as scenarios and played back at any time. The playback could be from the start or from any time or point on the battlefield, which made it ideal to aid in planning sequels or developing FRAGOs.

The BPV systems were distributed across the battlefield to each of the tactical operations centers and were networked on the local area network (LAN) as well. By networking the systems, the division and brigades were able to receive or pull data at will. The power and utility of the 3D-terrain engine developed by Massachusetts Institute of Technology and modified by the U.S. Army Communications-Electronics Command was phenomenal. All scenarios could be saved as "movies" in a personal computer-compatible (.MPG file extension) format. Thus, anyone with a laptop or desktop PC can view the file. No better means of communicating the desired effects of a unit's synchronized activity can be achieved by any other system I know of today.

**MS Office and Laptop PCs.** In the early stages of planning, networked PCs (using Microsoft Word, PowerPoint, and Excel) provided the means to develop rough concepts. Planners tried to use imported (.GIF file extension) pictures from the ASAS or BPV system to accurately represent the terrain in PowerPoint concept briefs. MS Word provided the basic text capability for the written order. Excel spreadsheets displayed the synchronization efforts of the wargame.

None of the three planning tools above have a built-in capability of capturing wargame results with words. While using the BPV during the wargame, we caught the conversation of the various planners—who were providing their respective input to each phase of an operation—on an Excel spreadsheet using a small LAN. We tried to avoid PowerPoint briefs, but PowerPoint is the only means by which to present basically textual briefings such as the mission and intent statements, and basic OB briefs. Toward the end of the AWEs, we began to experiment with briefs produced in PowerPoint but translated into hypertext message language (HTML) and then easily accessed with the built-in web-browser capabilities of the systems.

## The Products

The AWE planning products were digital in the strict sense of the word, but not necessarily integrated, easy, or even fast. We planners often improtuned that our digital appearance was only a facade of the integrated, lightning fast system we wanted. To the casual observer we may have appeared every bit as digitally integrated as the rest of the operation. This, in reality, was far from the truth. The Microsoft Office suite software provided the majority of the concept planning tools we used. We pushed the envelope on our TTP for creating, editing, and moving the information to the appropriate ATCCS systems, but often we were plagued by the shear weight of duplicate data entry into multiple systems. The products we generated will be discussed in the order in which they are first produced and then how they change and migrate as we near the OPORD brief.

We initially produced **orders of battle** in traditional line-and-block PowerPoint briefs. They were validated and refined during our

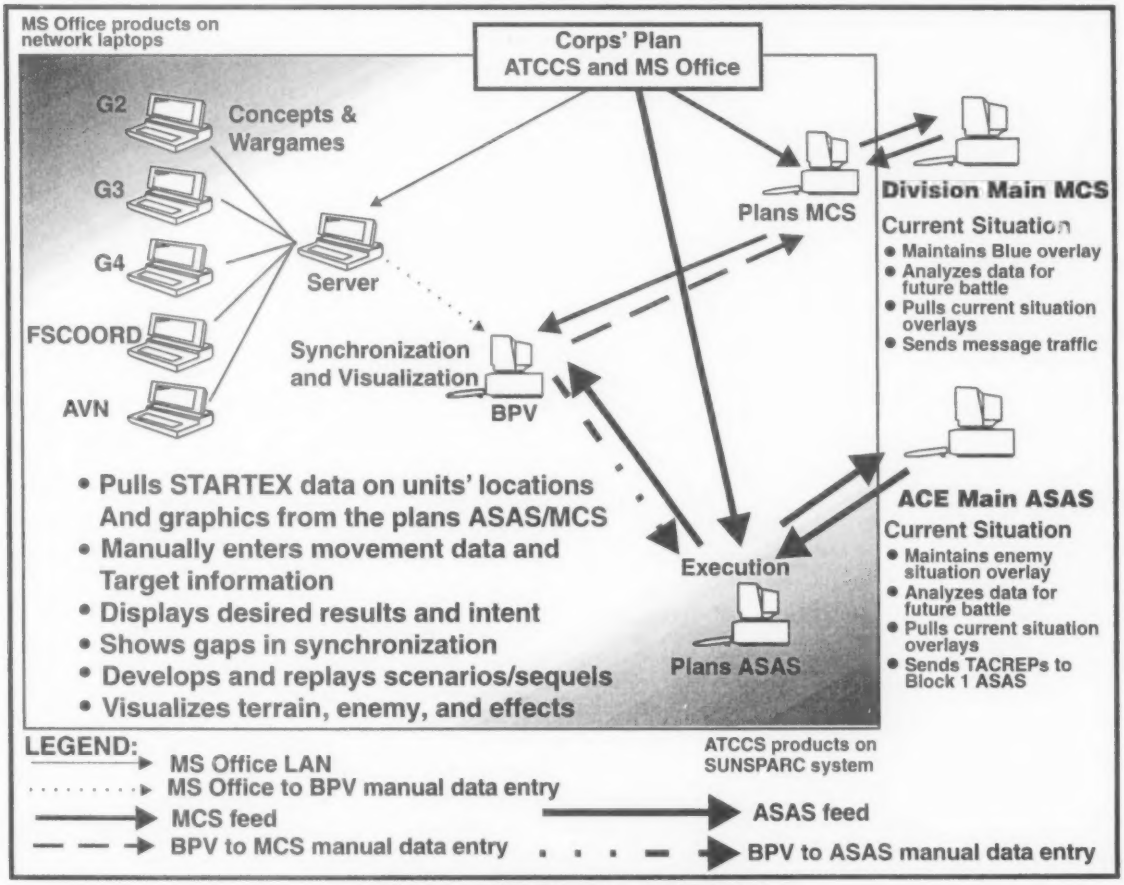


**Figure 1. AWE Planning Architecture.**

intelligence preparation of the battlefield and entered into the ASAS database. The PowerPoint version was then translated into HTML format for ready reference on the servers via a web browser. Next, we imported the OB at the icon level into the BPV where entity items (individual vehicles) were added. BPV has a templating capability that makes this very easy. For instance, to turn a motorized rifle regiment icon into a fully equipped MRR with all its equipment was a simple click of a button. With another click of the button, you can have the formation in which they are moving or their dispersion in the stop and defend mode. The OB is always visible in the BPV.

The engineer detachment produced the terrain and mobility products and the modified combined obstacles overlay using their systems, but it is important to note that we used PowerPoint, MCS, ASAS and the BPV to augment the salient points of terrain analysis. In the BPV system, the terrain factors showing movement had to be manually changed to slow a unit's march but the period spent adjusting the rates was well worth the time in the long run. By adjusting the movement factors in the BPV, we were able to visualize the synchronized movement of units. Other terrain factors were easily replicated in the ASAS, MCS, and the BPV system. Each system has built-in visibility and line-of-sight filters that can be toggled on and off depending on the level of detail needed. In most instances, products about key terrain were made as overlays in MCS and ASAS. PowerPoint and HTML files were created for the terrain brief.

**COA Overlays and Scenarios.** ASAS enemy data and corps graphics were imported to the BPV. We then wargamed the enemy COAs on the BPV. The G2 Plans Officer briefed the planners on the COAs using the BPV and they developed concept sketches on imported (.GIF) pictures of the terrain. This constituted a rough Blue concept used to obtain the commander's planning guidance. After receiving the guidance, the planners began the development and refinement of blue COAs on the ASAS, MCS, and BPV system. Data from ASAS and MCS was imported to the BPV. The planners programmed routes into the BPV and saved the desired effects of the Blue actions. They saved the scenario for each branch and sequel.

During the wargame, the COAs were refined and the results and synchronization recorded on Excel worksheets and on the BPV system. The scenarios were saved as graphic (.MPG) files, placed on the homepage, and disseminated to the brigades' BPVs. These scenarios (COAs) were played during the OPORD brief to ensure the subordinate commanders understood the commander's intent and synchronization requirements. The graphic (.MPG) files had the added advantage of being playable at any time on any PC tied to the tactical LAN. To augment the BPV scenarios and facilitate the transition to execution, the ACE produced snapshots "in time" from the results of the wargame. Overlays were created on ASAS and MCS for dissemination with the order. These overlays have text typed in the corner describing the events and activities that occur during that phase of the battle. Traditional graphics depict activity and action. The image (.GIF) files were saved and posted to the homepage as well.

## Value Added

Lethality was gained through the synergistic effects of well-thought out plans. To use a worn axiom, "a picture is worth a thousand words." With the use of the BPV, the commander's intent was never clearer, the results of the wargame never more precise, and the ability of the lower echelon commanders to review the thoughts and intent of the commander in his absence was never easier. Terrain is now, more than ever, integrated into the wargame process. The ability of the planners and commander to remotely see terrain and the enemy on it is indispensable.

## Improvement is Still Needed

Simply stated, any planning tool that speeds the planning process without sacrificing accuracy and integration is needed. Specifically, the planners need a wargaming tool that allows them to import starting data, manipulate it with the ease of a point and click graphical interface, assign units' coefficients to equipment that can run a quick wargame with or without the planner's intervention. In addition, they need the interfaces to send their products to MCS and ASAS.

## Conclusion

The AWE digital planning process was a success due in large part to the determination of the Division Commander and his staff to streamline the mostly manual system. With time as the crucial element in any plan, our tools need further development to speed the process. By doing this, the Army will maintain the edge we currently have in digitization.

**Endnote**

1. Microsoft® Office 97® MS Word™, and MS PowerPoint ™ are trademarks of the Microsoft Corporation. Several companies have trademarks on portions of Excel.

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# Intelligence Planning in the Digital Division

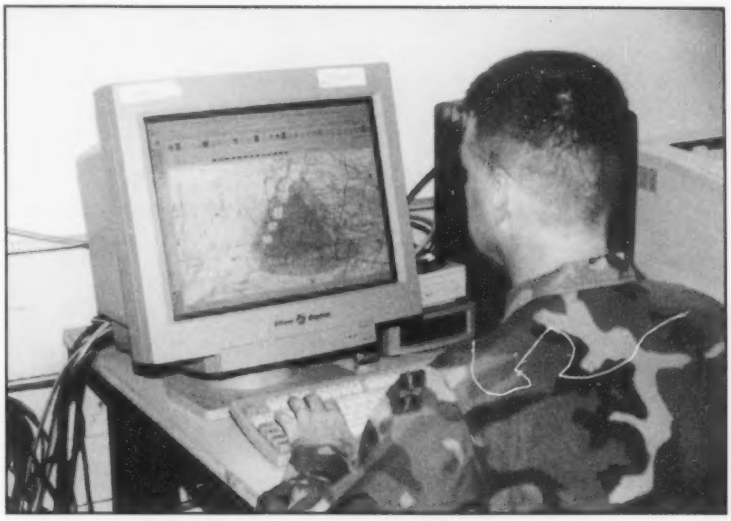
**by Major John E. Frame**

The Division XXI Advanced Warfighting Experiment (DAWE) gave the 4th Infantry Division (Mechanized) (4ID(M)) a unique opportunity to improve tactical planning methods and products. Our division plans team experimented with promising technologies. Automated systems targeted improved visualization of the projected battlefield situation and more rapid parallel planning. We used these systems to improve the accuracy of our analysis and the speed of orders production. While the systems modified some of our intelligence preparation of the battlefield (IPB) and collection planning (not discussed in this article) procedures, they did not change the basic planning sequence. We generally followed the military decisionmaking process (MDMP) outlined in **FM 101-5, Staff Organization and Operations.** As the G2 Planner for the division, I was an essential member of the plans team during the DAWE. This article briefly describes our digital planning tools and IPB products.

## Intelligence Planning Tools

We used three systems to produce and disseminate enemy courses of action (COAs) and intelligence annexes. Each system provided unique capabilities. The Battlefield Planning and Visualization (BPV) system was the primary tool for templating enemy COAs. Our planning team used the Maneuver Control System Windows(MCS-WIN)[1] to produce orders, annexes, synchronization matrices, and presentations. The All-Source Analysis System Remote Workstation (ASAS-RWS) gave us the capability to remotely communicate and share products with other members of the division intelligence team.

**BPV System**. The BPV system is a Silicon Graphics workstation with graphical software. It allows planners to analyze and record a COA using capabilities unavailable on any other single system. The most used and useful capability is the animation of operations.



U S Army photos

**The BPV workstation during the November 1997 DAWE.**

Animation illustrates the execution of actions over time and space. Animated scenarios were essential to a shared understanding of the many complex offensive actions considered during our planning. BPV allowed us to plan "Blue" against "Red" on a single platform, then modify and present our scenario to demonstrate wargame results.

**MCS-WIN**. The MCS-Win is a software package that includes the most used functions of the standard MCS workstation, loaded on laptop computers using the WINDOWS NTTM operating system. MCS-WIN gave us the capability to develop and disseminate the standard text portions of an order with presentation slides to highlight BPV scenarios and other information.

Its most useful tools were those that we developed for collaborative planning. We developed formats using Microsoft Excel-based spreadsheets for the synchronization matrix and for our short order format. Our individual laptops were networked for simultaneous entry and review of matrices. This greatly reduced the time required for the recording of our wargame and the development of orders.

**ASAS-RWS**. The ASAS-RWS was the tool used for maintaining an eye on the current situation and for sharing our products. We monitored the Distributed Digital Overlays (DDOs) maintained by the TAC1 (our division tactical command post) and the brigade combat teams. We also used the system to

monitor the 24-, 48- and 72-hour forecasts from the Corps. These were all available on the III Corps Intelligence Tactical Internet Homepage. The homepage concept allowed us to share our planning products rapidly throughout the Corps.

The G2 Planners' products were posted on the 4ID(M) Intelligence Homepage and were therefore accessible by any Army Tactical Command and Control System (ATCCS) workstation. We posted a daily update to inform the staff and subordinate S2s of planning team developments and posted the text and images produced during the planning process. We posted the most likely enemy COA as either a map-registered graphics image for a defense, or an animated image depicting an attack.

## Planning Products

Our two cornerstone products were digital BPV scenarios and traditional COA descriptions with annotated key enemy actions. Minimally, we produced at least these two products for every fragmentary order (FRAGO). The BPV scenarios were the more innovative of these two products.

Planners working on MCS-WIN laptop computers.

**BPV Scenarios**. As in the analog planning process, the digital graphic representation of a COA was critical. Using the BPV animation, we depicted the enemy's actions over time and space. We continued to use graphics to highlight and explain the enemy COA. However, animation eliminated traditional timelines. The scenario with its clock function presented enemy movements more accurately.

The BPV scenarios illustrated the enemy's COA at any time or over any period. The G2 planners input the enemy's organization and a route and march rate of each unit. Our rear-projection large-screen display showed the scenarios during briefings to demonstrate how I visualized the enemy's actions. Then we used file transfer protocol (FTP) to disseminate the scenarios to subordinate units that had a BPV system. For those that did not, we produced time-/map-registered snapshots and posted them to the home page as still images (defense) or animated images (offense).

The G3 planners used the initial scenarios I advanced during COA development. Once we completed the Blue COA, we merged the enemy and friendly scenarios for the wargame. The plans team reviewed the merged scenario and modified it during the wargame to incorporate the expected battlefield actions and outcomes. This updated COA gave our division leadership a digital and graphic record of each wargame. Once the scenario was approved, we again disseminated it to subordinate units as an animated representation of the order.

### *Enemy Most Likely COA*

1 IMRB (AA #5 to NUERNBERG) and a regiment of 14 TD (AA #4 to BAMBERG) lead first echelon regiments, as Army Forward Detachments, to secure positions that delay the establishment of the covering force.

1 CAA attacks with two MRD in the first echelon and two TD in the second echelon. 10 MRD (AA#4) and 11 MRD (AA#5) attack east to defeat the covering force and secure crossings on the MAIN-DONAU CANAL. 14 TD follows 10 MRD and 15 TD follows 11 MRD in the second echelon. 1 CAA retains a tank regiment as the Army reserve.

17 IMRD establishes a blocking position vicinity FULDA to protect the 2 AG attack. One MRR from this division attacks abreast of 140 MRR and 1IMRB as a division forward detachment.

A battalion from 17 AASLT BDE secures the A3/A7 intersection vicinity WUERZBURG at H+5. 17 Art Div, 17 MRL Rgt, 17(HP) Bde and 17 SSM Bde provide fires to 1 CAA. 1 AT Rgt secures AAG/AGRAs. 176 AT Bde protects 1 CAA's southern flank. (BPV

**Figure 1. Example of COA Description from the 4ID(M) OPORD.**

## ENEMY ACTIONS

SPF obs mvmt and target HVAs (C2/sensors). Fixed air/SSM fire choke points. 800 INF def key choke point near cities. AIR ASSLT BN secures autobahn intersection A3/A7 vic WURZBURG at H+4/5. Div Recon PL SPIKE to PL SANDY. FDs march PL KARL to PL SPIKE. FDs defeated and defend east of PL SPIKE (H+15).

1st Ech RGTs cross PL SPIKE(H+15-17), then delayed 6 hours while arty reorg and pos. AAG and AGRA establish pos east and west of PL SPIKE (H+18-22) and begin PHASE II fires.

1st Ech RGTs PL KIM at H+26. Lead DIVs culminate between PL KIM and OWL H+32. 1st Ech RGTs/15 TD at PL SPIKE H+33. 14TD contained in ODENWALD vic PL SPIKE at H+36 and defeated H+39. 15TD halt and defend PL KIM H+39. 2IMRB arrives PL SPIKE at H+50.

**Figure 2. Example of Enemy Actions from a 4ID(M) OPORD.**

**COA and Key Actions**. To explain each of our BPV scenarios, it was still necessary to produce text that described our perception of the enemy commander's concept of the operation. These traditional products focused on the task and purpose of each subordinate unit. We highlighted in parentheses the associated BPV scenario or snapshots within each COA description.

Throughout our wargame, we identified the key enemy events or actions that we wanted to highlight to the command. We also included these in the matrix portion of the operations orders (OPORDs) and fragmentary orders (FRAGOs) to illustrate when we expected them to take place during the operation. This also supported initial collection planning and targeting.

## Results

Our precision improved. We were able to conduct nearly all planning on a scaleable digital map. This alleviated the inaccuracies common in developing COAs using maps, acetate, and sketches. The map forces us to always consider the impacts of terrain and realistic spatial relationships. The animation tools in BPV allowed us to more easily complete an analysis and comparison of time during the operation. These tools were exceptional because they allowed us to rapidly analyze and modify our actions based on a more realistic representation of the battlefield.

We gained speed in production through our collaborative systems. MCS-WIN allowed the staff to simultaneously plan and input to the order. We found it easier to conduct parallel planning. The digital dissemination of warning orders, FRAGOs, and templates was the key. The MCS and ASAS gave us platforms through which to share information rapidly and remotely. Without the ability to communicate digitally in a compatible format, our planning system would have slowed tremendously and required the use of couriers and less accurate products.

## Conclusion

Rapid and accurate planning was critical to the division. It gave us agility and the initiative. Using the described tools, the G2 Planner consistently produced more precise products for the commander. While our improvements in accuracy were initially at the expense of timeliness, during the DAWE we produced and disseminated orders faster than ever.

In five months we developed and implemented new digital methods and products. It was a tough and frustrating path to develop effective digital plans. Predictably, we were tempted to revert to known and traditional analog techniques to finish our plans. However, we consistently pursued digital solutions that in the end rewarded us with a faster and more accurate planning system.

### Glossary

AA avenue of approach
AAG army artillery group
AASLT air assault
AG army group
AGRA army group of rockets and artillery
Art artillery
AT antitank
BDE brigade
$C^2$ command and control
CAA combined arms army
Div division
Ech echelon
FD forward detachment
HP high-powered (e.g., 17th HP Brigade, an artillery unit)
HVA high-value asset
Inf infantry
MRD motorized rifle division
MRB motorized rifle battalion
MRL multiple rocket launcher
MRR motorized rifle regiment
PL phase line
Rgt regiment
SPF special purpose forces
SSM surface-to-surface missile
TB tank battalion

**Endnote**

1. Microsoft® Office 97® MS Word™, and MS PowerPoint™ are trademarks of the Microsoft Corporation. Several Companies have trademarks on portions of Excel. MCS-WIN is a Windows® program.

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# Collection Management Lessons Learned During the Division AWE

by Captain Brian R. Dunmire

*Know the enemy, know yourself: your victory will never be endangered. Know the ground, know the weather, your victory will be total.*

*—Sun Tzu, 4th Century B.C.E.*

The Division XXI Advanced Warfighting Experiment (DAWE) was a milestone event in the Army's history. The 4th Infantry Division (Mechanized) (4ID(M), the Army's Experimental Force (EXFOR) tested dozens of new initiatives, focusing primarily on information management and dissemination technologies. While advanced systems like the RAH-66 Comanche helicopter and the Outrider unmanned aerial vehicle (UAV) were also tested in simulation, the focus of 4ID(M) and the Army was on how the Army Tactical Command and Control Systems (ATCCS) enhanced the command and control functions of the division. Some of the most important lessons learned during the DAWE in the Intelligence battlefield functional area (BFA) concerned collection management (CM).

**Information management** is a great challenge that military professionals face in both Force XXI and the Army After Next. Determining what information we need, how to get it, how to manipulate it, and then quickly putting that information to use is rapidly becoming a most important command decision a leader must make on the Force XXI battlefield. During our experiences in the DAWE, vast quantities of combat information poured in from all echelons, requiring direction, analysis, and dissemination. A significant lesson learned was that how this information was gained is just as important as how it was manipulated. Given the collection capabilities that a digitized division has, commanders can now, more than ever, truly see the battlefield in nearly real time.

## Background

CM is about determining intelligence information requirements to support the division commander's decisions and intent in gaining information dominance, shaping the battlefield, conducting dominant maneuver, and in protecting the force. It also pertains to directing the collection effort to answer those requirements. **FM 34-2, Collection Management and Synchronization Planning**, provides the doctrinal basis.

CM determines the intelligence requirements, and tasks or requests the appropriate assets to conduct intelligence or reconnaissance operations to obtain the necessary information in time for the commander's decisionmaking. The information is analyzed and evaluated for completeness and reliability, and is then displayed for the commander. Based on the new information, the commander continues to direct the collection effort, through the G2, to focus on answering new information requirements.

## EXFOR Advances

During a regular Battle Command Training Program (BCTP) exercise for a heavy division, the division often initially fights a depleted division in the defense, another mechanized division during a movement to contact, and up to two enemy divisions during the friendly or "Blue" force defensive. In the DAWE, the 4ID(M) destroyed or defeated 4 armies, 13 enemy divisions (6 mechanized divisions and 7 tank divisions), 4 independent mechanized brigades, and 25 supporting artillery brigades during the nine-day experiment. Five more enemy divisions were converging to stop the 4ID(M) from penetrating the Rhine River defenses at the end of the experiment, but were unsuccessful. What contributed to this amazing feat? Advanced sensors, coupled with brilliant munitions and bold actions, enabled the command to achieve this military feat of arms.

## Changes in the EXFOR

What was new in the DAWE? There were tremendous advances. The division's organic reconnaissance, surveillance, and target acquisition capabilities were easily tripled, if not more. Fifty-one platoon equivalents of reconnaissance, surveillance, and target acquisition assets supported 81 maneuver platoons. The challenge for the division was to be able to effectively direct these assets and assimilate the quantity of information they produced.

Wide-area surveillance (WAS) systems---such as the Joint Surveillance Target Attack Radar System (Joint STARS), Guardrail, the Intelligence Electronic Warfare Common Sensor (IEWCS) systems, AN/TPQ-37 Firefinder radar, and Sentinel air defense radar---provided all levels of command with near-real-time situational awareness of battlefield movements. Steerable systems, such as UAVs, Comanche helicopters, and ground reconnaissance and cavalry troops with future scout vehicles (FSVs) were the major reconnaissance platforms. The model we used for the FSV was an M114-size vehicle armed with a 30-millimeter can-

non and fitted with a mast-mounted sensor package that featured a second-generation forward-looking infrared (FLIR). The FSV (or "future scout combat system" in some literature) has a four-soldier crew.

## Collection Management Lessons Learned

What were the major lessons learned for CM? Several important issues were confirmed in the DAWE, including the—

- Need for digital tools in both planning and execution of CM.
- Utility of multidiscipline sensors to provide the commanders' required information.
- Necessity for collaborative systems to coordinate and maintain the unity of the collection effort.
- Efficacy of modified digital dissemination methods.
- Fact that CM is a command issue.

**Digital tools are vital** to the success of the CM effort, both in planning and in the execution of the effort. The collection manager needs the resources of all the Army Tactical Command and Control System (ATCCS) systems to successfully complete the mission. Currently, the All-Source Analysis System-Remote Workstation (ASAS-RWS) has limited intelligence synchronization tools, promising for providing guidance for intelligence analysis, but insufficient for tasking or synchronizing the wide array of sensors and organizations operating in the division. For planning purposes, we primarily used MS Office[1] products. We used MS Word for writing Annex B and the collection plan, employing both the Maneuver Control System-Windows (MCS-WIN) in the planning stage and ASAS-RWS during the execution stage. We maintained the Intelligence Synchronization Matrix with Excel. The command group saw the collection strategy, collection focus, and priority intelligence requirements (PIR) presented in PowerPoint graphics. See Figure 1 for an example of our DAWE collection coverage.

We employed the ASAS-RWS for maintaining the homepage, developing NAI overlays, UAV operations overlays, for conducting database searches to answer requests for information (RFIs), and for maintaining current enemy situational awareness by pulling the distributed digital overlay (DDO) at the division's tactical command post (CP), TAC1. This led to a challenge to the CM section to evaluate reporting in a timely manner: the division no longer kept a central database, but now maintained databases at each CP.

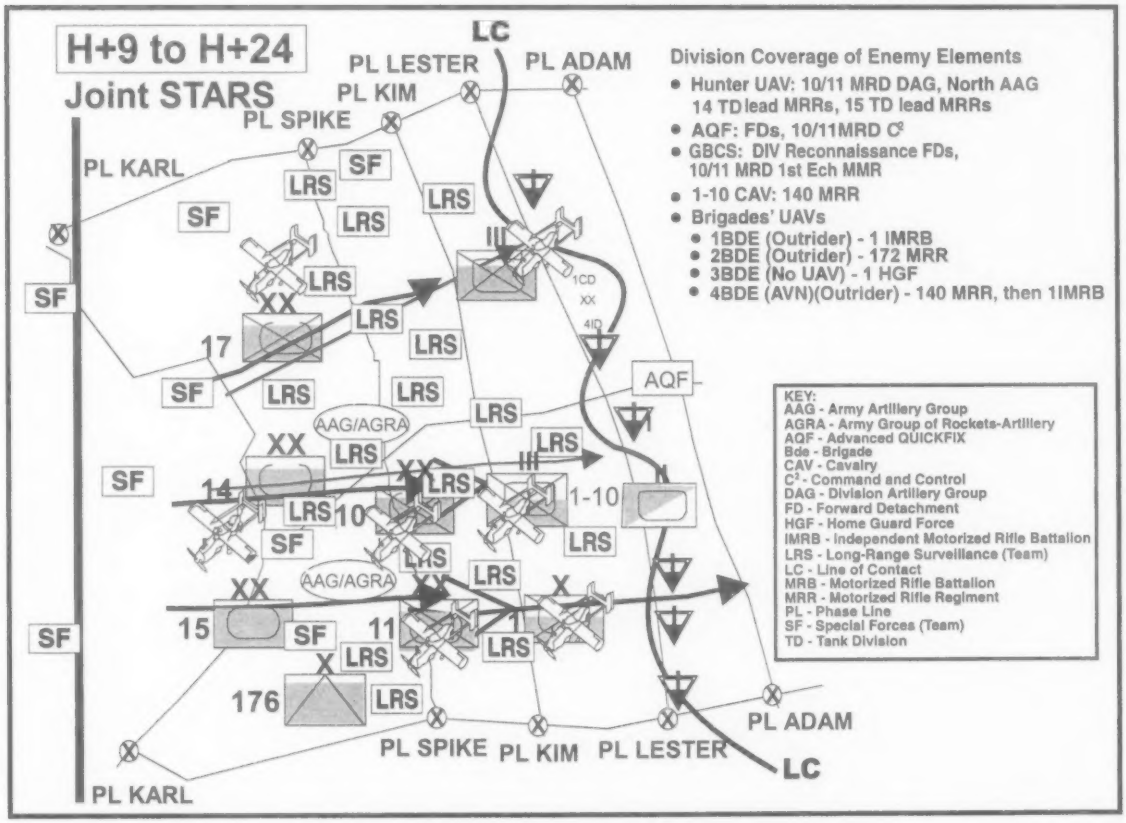



**Figure 1. Collection Coverage During the DAWE.**

There was no automated method to evaluate reporting from the division main CP (D-MAIN) during the DAWE. Use of "infobot" or "knowbot" technologies would greatly enhance the capacity of the section to actively search all the CPs' databases to rapidly obtain the information required to answer the commander's PIR.

We initially had problems in maintaining the current locations and status of the division's sensors. This was partially solved by obtaining an MCS-WIN to provide the section with friendly unit locations. However, the MCS-WIN had a more limited capability than that required by the collection manager.

The collection manager must know the current location and status of all major division sensors, both land-based and air-based, and must know the capabilities of those systems, and the areas they are covering. This information requirement extends far beyond just military intelligence systems. Knowledge to the entity level for ground-based systems (such as the TPQ-36/37 Firefinder and Sentinel radars, IEWCS ground-based systems) and all airborne platforms (like UAVs, Comanches, Guardrail, Joint STARS, and IEWCS Advanced QUICKFIX systems) are essential to mission management success. Platoon-level information is required for all cavalry, scout, and chemical and engineer reconnaissance units. Knowing the location of sensor strings such as the Improved-Remotely Monitored Battlefield Sensor System (I-REMBASS) and Raptor antitank mined system is also vital information for the collection manager. During the DAWE, the tools for determining this information were inadequate. The tactics, techniques, and procedures (TTP) developed to overcome this shortfall was a constant verbal dialogue between the G2, the MI battalion operations center (BOC), the division and corps collection managers, and the command group. While this was effective, the digital tools were insufficient.

The multidiscipline sensor array of the division was successful in providing commanders at all levels with the information necessary to prosecute the fight successfully. Decentralized execution of the centrally developed collection plan was the effect of the lack of tools to digitally direct the collection effort from the D-MAIN. However, the combination of broadcast dissemination of information by sensors like Joint STARS and the DDO process enabled the division and brigades to answer most of their own internal PIR and targeting needs. The brigades and the cavalry squadron received Joint STARS and SIGINT data through the Common Ground Station-Prototype (CGS-P) surrogates, enabling these units to cue their own organic resources (such as UAVs, RAH-66 Comanches, and FSVs) to the location of the enemy forces moving into their areas of operations (AOs). This information created a synergy of collection effort, because all CPs knew at the same time when enemy forces began movement.

Intelligence handover during the DAWE was a challenge, but we developed a number of very useful TTP to help handle this issue. Historically, there has been a challenge here due to the limited number of sensors. The doctrinal intelligence handover line was sufficient here. In 4ID(M), the brigades had significantly increased capabilities and awareness. Intelligence handover was more an issue of assigning brigades, the division, and requesting corps to track specific units, using something like a "force-oriented" named area of interest rather than a terrain-based NAI. It was unnecessary to continually direct brigades or the cavalry squadron to vector their Outriders, Comanches, or FSVs to the Joint STARS moving target indicators (MTIs) from the division level, because commanders at that level were already directing their own systems to the MTIs.

The TTP that we used involved dividing the battlefield by target set, thereby deconflicting collection. For example, the 1st Brigade Combat Team (BCT) tracks the 10th Motorized Rifle Division, 2BCT tracks the 11th MRD, 1-10 Cavalry tracks the 14th Tank Division, and the Division would focus on the 1st Combined Arms Army's (CAA) Army Artillery Group, Group of Rockets and Artillery (AGRA), and the 15th Tank Division. There was a danger in this, because sometimes if a major enemy force came into the division AO, the division, brigades, and the cavalry squadron would all send their ground and air assets to the target set. Having access to the feed from the Forward Area Air Defense Command, Control, Communications, and Intelligence (FAADC$^3$I) is critical to airspace deconfliction for airborne sensors, because if that information would have been available, we could have known immediately that there were already multiple airborne platforms working a given target set. This tracking of friendly forces would have enabled the commander and G2 to more efficiently direct the collection effort. Access to FAADC$^3$I would have also given us a better picture of the air threat against our airborne platforms. Due to the limitations of the simulation, Comanches could not conduct air-to-air engagements as they were designed to do, nor could the opposing force's fixed- and rotary-wing aircraft engage our UAVs. With the addition of the air-to-air operations emerging in the division, this bears more intensive scrutiny by the Army intelligence community at corps level and below. Figure 2 lists some of the new sensors and organizations 4ID(M) tested during the DAWE.

**Collaborative tools** are a necessity for the collection effort to determine requirements, conduct target handoff, and to maintain the unity of the collection effort. For the DAWE, the ASAS-RWS only had a chat function that operated between two points,

| SENSORS/UNITS | CURRENT MTO&E | DAWE TO&E |
|---|---|---|
| J-STARS Downlink | D-MAIN only LGSM (8-12 Hour/Day) | CGS: D-MAIN, TAC1 1/2/3/4 Bde, Div Cavalry (24-7) |
| Div Cavalry Troops | 3 (9 X M1A1, 13 X M3A2) Sensor - 3-4km Range | 3 (9 X M1A2, 9 X FSV) Sensor - 12km Range |
| Bde Recon Troops | 0 | 3 (13 X FSV) |
| Air Cavalry Troops | 2 (8 X OH-58D (Kiowa Warrior)) | 2 (12 X RAH-66, MMW Radar – 12km Range) |
| Air Recon Platoon | 0 | 3-9 (3 X RAH-66 per AHC) |
| Bn Scout Platoon | 9 (10 X HMMWV) | 9 (6 X FSV) |
| Tactical UAV (Outrider) | 0 | 3 Baselines (4 X A/C) 16 Hour/Day Coverage |
| Tactical UAV (Hunter) | 0 | 1 Baseline (8 X A/C) 20 Hour/Day Coverage |
| Attack Aviation | 24 X AH-64A | 15-45 X AH-64D (Longbow MMW Radar – 8+km Range) |
| Ground-Based SIGINT | 5 X TSQ-138 (40km), 3 X TRQ-32 (30km) (no ELINT) | 6 X GBCS (40km +) (COMINT, ELINT, EA vs. LPI FM Communications) |
| Air-Based SIGINT | 3 X UH-60A (QF) 50km | 4 X UH-60B (AQF) 105km |
| TPQ-37 Firefinder | 2 + 2 (50km Range) | 2+2 (150km Range) |
| TPQ-36 Firefinder | 3 (25km Range) | 3 (50km Range) |
| Sentinel ADA Radar | 0 | 6 (40km+ Range) |
| Engineer Recon Platoons | 3 | 3 |
| Raptor Minefield Sets | 0 | 48 (like I-REMBASS) – 30km Range |
| NBC Recon | 6 X Fox Recon (Proximity Recon) | 30 X Improved Fox Recon (MSI - 5km Range) |

**Key:**

| | | | | | |
|---|---|---|---|---|---|
| A/C | aircraft | FM | frequency modulation | MTO&E | modified table of organization and equipment |
| AHC | attack helicopter company | HMMWV | high mobility multi-purpose wheeled vehicle | | |
| AQF | Advanced QUICKFIX | LGSM | light ground station module | QF | QUICKFIX |
| COMINT | communications intelligence | LPI | low probability of intercept | Recon | reconnaissance |
| EA | electronic attack | MMW | millimeter wave | TO&E | table of organization and equipment |
| ELINT | electronic intelligence | MSI | multispectral imaging | | |

**Figure 2. Sensors and Organizations Tested.**

thereby limiting the collaborative planning and operational opportunities. Due to the rapid changes in the battlefield situation, the focus of the collection effort changed rapidly, even hourly. This was caused by the speed of the operations of the division, and the division's fire support capabilities. I recommend that a CM representative would be stationed at the TAC1 to process changes in requirements from the TAC1 and to coordinate with the CM at D-MAIN to support the targeting effort in the dynamic environment. We had a representative at TAC1 during the ramp-up exercise, but not during the DAWE.

This requirement is a lesson learned for the DAWE. For example, in a single night, nearly five maneuver regiments worth of enemy combat power was destroyed by fires directed by TAC1 using the division-level UAVs and multiple launch rocket system (MLRS). This massing of fires, coupled with the efforts of the three ground maneuver brigades, the cavalry squadron, and the aviation brigade caused the defeat of an entire CAA in less than 24 hours. The collection effort followed the commander's direction, with the guidance rapidly flowing from TAC1. During that night, the combined efforts of the division, using a rapid moving targeting sequence of decide-detect-deliver, 4ID(M) destroyed or defeated elements of an entire CAA.

The targeting effort in the division was significantly different from that of a standard division. Normally, the deep fight is run from D-MAIN, and the close fight fought from the division tactical CP, the DTAC. In 4ID(M), long-range planning for both operations and targeting was conducted at the D-MAIN. From a temporal perspective, D-MAIN focused on the battle 12 to 72 hours out, with the majority of planning focusing on the 24- to 48-hour time block. Our TAC1 was responsible for conducting all current operations, including what used to be called deep and close operations. Collaborative tools are essential to coordinate between the planning operations occurring at the operations planning cell, the targeting cell, and current operations element operating at TAC1. For the DAWE, the CM section was located at D-MAIN with the G2 as part of the Analysis and Control Element (ACE), while the MI BOC with the brigade commander and the S3 were at the TAC1. This was done because---for the DAWE---the division was emulating having the D-MAIN in a sanctuary area up to 300 kilometers behind the forward line of troops, while the TAC1 was operating close to the FLOT. Although we were able to overcome many of the challenges of split based operations, the need for collaborative tools was again highlighted.

**Dissemination**, in the classic sense, has been virtually elimi-

nated from the section through the use of the dynamically distributed overlays (DDOs), the homepage on ASAS-RWS, and through broadcast dissemination of the echelons-above-division collection systems like Joint STARS. The DDO was used in the ASAS-RWS to share information to all users at each of the CPs. Using this TTP, the CPs at every echelon were able to "pull" the current enemy situation from any unit at will, thereby creating great efficiencies in information distribution. TAC1 maintained the "relevant common picture" for the division by combining the DDOs from all the brigades and from the D-MAIN, thereby creating a common basis for intelligence analysis in the division.

The homepage function returned to the ASAS-RWS prior to the DAWE, and has yet again proven to be a valuable tool. We used it to distribute information about all intelligence-derived information requirements other than the current enemy situation. The 4ID(M) intelligence homepage was linked to the III Corps Homepage, which also gave S2s at all levels access to information from the Corps. An important feature of the homepage was that any computer system on the tactical internet that had a browser could access the homepage. Thus, any ATCCS machine (MCS, ASAS, Advanced Field Artillery Tactical Data System (AFATDS), Combat Service Support Control System (CSSCS), and FAADC$^3$I) or computer on the tactical local area network (TACLAN) could get to the homepage, thereby dramatically increasing the number of places from which intelligence information could be accessed. This was very important because we had units that did not have ATCCS systems attached to those at the division, so the homepage became an important conduit for information dissemination.

All intelligence sections, such as CM, G2 Plans, the battle damage assessment (BDA) section, and the All-Source Intelligence Section (ASIS) were prime users of the homepage. The CM section posted all divisional units' current PIR, answered and received RFIs, the collection plan and intelligence synchronization matrix, targeting products, and collection emphasis messages to the home page. National-level imagery was also posted. The G2 Planner would have the current planning objectives of the day, presentations he gave to the Commander, and animated Battlefield Planning and Visualization (BPV) scenarios of potential enemy courses of action posted to the homepage. The BDA section would post updated BDA, focusing on the enemy maneuver and artillery systems. The ASIT posted divisional intelligence summaries, orders of battle, and intelligence reports to the homepage. In the future, we will have more "write permissions" built into the homepage, so that the subordinate units can write changes to their own PIR, as well as enabling them to help answer RFIs.

## Collection is a Command Issue

The DAWE also taught us that the employment of sensors and the collection strategy is a command issue. During the Division XXI AWE, the employment of sensors and the focus of intelligence collection and analysis was truly a command issue. The Commander and Assistant Division Commander (Maneuver) frequently provided direction to the G2 and 104th MI Battalion Commander. At no time did the collection effort stray from the Commander's focus. However, the use of certain collection systems, such as the UAV, rapidly became a command issue. Commanders often personally directed the operations of the UAV, both in support of the collection effort and in support of the targeting effort. If in a time of necessity, a brigade needed to be tasked to fly a division mission, it was a decision made at the general officer and brigade commander level. Commanders at all levels were very involved in the employment of sensors to answer their requirements.

## Conclusion

The trends seen in collection management showed intelligence synchronization and orchestration challenges are increasing, not decreasing. Some essential intelligence lessons learned were that digital and collaborative tools are vital to the success of the CM effort, both in planning and in the execution of the effort. The multidiscipline sensor array of the division successfully provided commanders at all levels with the information necessary to prosecute the fight successfully. The dissemination function has been significantly changed based on the combination of the DDO and broadcast dissemination. Finally, the employment of sensors and the collection strategy is truly a command issue, not just an intelligence issue. The greatest success in the DAWE collection management was the ability to rapidly direct operations and respond to continually changing battlefield conditions and requirements due to the highly capable sensor suite that the division had or to which it had access.

**Endnote**

1. Microsoft® Office 97® MS Word™, and MS PowerPoint ™ are trademarks of the Microsoft Corporation. Several companies have trademarks on portions of Excel.

*Captain Dunmire is currently attending the MI Officer Advanced Course. During the DAWE, he was the 4ID(M) Collection Manager. He was previously the 1-10 Cavalry S2 during the Task Force XXI AWE and the initial DAWE command post exercises. He has also served as a company executive officer, 104th MI Battalion during the transition to the General Support Company (see the July-September 1996 **MIPB** for a related article); Platoon Leader, D Company 522 MI Battalion; and Assistant S2, 1st Tiger Brigade, 2d Armored Division. He has a master of arts degree in International Relations from Saint Mary's University, and a bachelor of arts degree in History from Pennsylvania State University. You can contact him via E-mail at bdunmire@aol.com.*

# Preparing for Digitization:

## Surviving the Army Before the "Army After Next"

**by Captain Kris Muench**

***Sir, I wouldn't get up out of the electric chair to do this over again.***
**—Anonymous Private First Class to a Battle Command Training Program Observer/Controller during the DAWE, November 1997**

Our Army is changing. The Army's senior leadership has committed to changing every aspect of the way we shoot, move, and communicate. The successes of the Task Force XXI (TF XXI) Advanced Warfighting Experiment (AWE) in March 1997 and the Division XXI AWE (DAWE) in November 1997 have encouraged those that control the Army's purse strings to accelerate the largest and most ambitious force modernization in a peacetime Army.

Like it or not, digitization is coming faster than we expected. Within the next eight years, three of the Army's six heavy divisions, a corps, and an armored cavalry regiment will digitize. The careers of our junior soldiers, sergeants, warrants, and commissioned officers will fall within the "Army After Next" process.

It will not be easy. Every facet of the intelligence cycle in every discipline at every echelon is changing. For those in the tactical echelons, our job has always been difficult. New collectors, processors, communications, and media that few people understand entirely add more complexity to the fast pace of the close battle, at least for now.

For those who want to stick around for a few more years, this article is a guide to help you anticipate some of the many challenges of digitization. While I am directing these comments to those who may serve as G2s, S2s, or analysis and control element (ACE) battle captains and operations officers, the lessons learned from the TF XXI AWE and DAWE apply to all members of the intelligence community.

### Know Yourself

Many would echo the words of the unnamed private first class to the observer/controller during the DAWE. However, those words highlight the long and frustrating days and nights that many people spent making developmental technologies work while fighting on a complex battlefield. In reality, both TF XXI and the 4th Infantry Division (Mechanized) ((4ID(M)), the experimental force (EXFOR), scored impressive tactical victories in their respective AWEs, something the participating soldiers and leaders point to with great pride. Unfortunately for some, the reward for participating in either AWE is not an immediate one---there is no quick end-state or victory on the road to digitization. The intrinsic benefit is having some part in shaping a future Army that will be more lethal while minimizing our own casualties.

Once you step into the digitization vortex, do not look back---at least not in anguish. The Army did great things during the Cold War and the Gulf War with analog (pre-digitized) tactics, techniques, and procedures (TTP). Our comfort level with the analog TTP was a result of doing our best with what we had. We now have the opportunity to do a whole lot better.

For example, who has not experienced the frustration of simultaneously trying to receive critical spot reports from TF Scouts, answer requests for information, and send analysis of the enemy situation and intent on a clogged FM (frequency modulated) operations and intelligence (O&I) communications net? FM radios are hardly antiquated, but the ability to send and receive combat information and intelligence over a relatively unclogged digital net should excite most Intelligence professionals.

This does not mean that the Force XXI digital systems will always make your work easier in the short run. The All-Source Analysis System-Remote Workstation (ASAS-RWS) 3.1, for example, is a complex system that is still developing. The Army Tactical Command and Control Systems (ATCCS), which includes the ASAS-RWS 3.1, can exchange friendly and enemy unit information, but not overlays and most graphics in a doctrinal format. You can now collect, process, and disseminate a great deal more intelligence than ever before.

### Know Your Enemy

The crew-served weapon of the MI Corps is analysis. (Sorry, it is not ASAS.) Regardless of the digital systems available, the essential task for all analysts is to train on enemy order of battle and doctrine before a major exercise or deployment. Our job has not changed; it is still to get timely and relevant intelligence to the commander.

This is a greater challenge than it appears. Every version of the ASAS (ASAS-Single Source, -All Source, -RWS 2.1, -RWS 3.1, etc.) requires extensive training just to learn to operate the system. The time spent on systems training is often time taken from tactical intelligence training. This has led some to wonder what the role of a 96B is: "analyst" or "operator." Using a 96B as only an operator is equivalent to using him or her as just a radiotele-

phone operator. (However, this has frequently happened.) Developing analysts using new systems as a tool takes a great deal of time, a scarce commodity for all.

Another challenge that you will face is a system crash during a battle (a frequent occurrence in the early stages of both the TF XXI and the DAWE). In many command posts (CPs), there is still an analog "backup" map. This is a good interim solution—both TF XXI and some elements in the DAWE found it helpful—but it cannot last. The analog backup often becomes a crutch rather than an aid; it often diverts commanders and staffs from learning how to visualize the battlefield using a digital display. For the G2 or S2 battle captain, the prospect of updating two (or more) enemy situation displays is harrowing, given already strained personnel resources.

In light of all this, I offer three recommendations. First, **all analysts, especially battle captains, must develop a "mental picture" of the battlefield.** You must be able to recite the current enemy situation for your commander and battle staff, with or without a visual aid. A hand-held sketch is especially useful as a backup. Some helpful devices that many used during the last two AWEs were map-boards and laminated ASAS-RWS printouts or Microsoft PowerPoint slides portraying the battlespace. Captain Tom Doughty, a 4ID(M) G2 battle captain during the DAWE, printed a copy of his current situation overlay every thirty minutes or whenever the situation changed. This allowed him to quickly jump to his map-board and brief the Assistant Division Commander (Maneuver) and the battle staff. Whatever you use should be portable, easy to update, and legible.

Next, **get directly involved in the program of instruction (POI) for your system's training.** Any instructor or contractor should be willing to adapt systems training to meet your tactical training needs. Before the DAWE, the 4ID(M) G2, 104th MI Battalion, and the Battle Command Battle Lab-Huachuca (BCBL-H) all orchestrated collective training for their analysts using the ASAS-RWS 3.1 as a tool. This proved instrumental in giving analysts and leaders a chance to develop TTP on digital battle tracking and creating digital analytical products. The difference in the next ramp-up exercise from the one before was phenomenal.

Finally, **develop "competence in depth."** Nothing makes a battle captain's job easier than knowing that one of your soldiers can answer hard questions when you are away from the CP for a moment. The precious time invested teaching your subordinates how to maintain situational awareness and analysis using the systems available will pay multiple dividends when really needed.

## Know Your System

Leaders must train with their systems. Being able to use digital systems to communicate is not just a skill level 1 or 2 task. One would question a battle captain that did not know how to operate a FM radio, so it is no great leap to question one that has not learned to operate his new primary communications system.

You will also find that commanders, chiefs of staff, and executive officers will have a keen interest in the capabilities and limitations of these systems taking up space in the CP. They will turn to the battle captain before any one else. You need to have an intimate knowledge of your system that you can gain only through working on it.

One realization that came out of the DAWE was that an analyst with one system could only do one thing at a time. As you learn more about your systems, think about which functions are most important to you at any particular time. If you have only one system and you use it as a briefing tool, realize that the analyst on that one system cannot simultaneously receive or send messages during the time you prepare and present the briefing. If you use that analyst and system to do

Photos courtesy of SPC Kap Kim

**MG Wallace, Commander of the 4ID(M), working at TAC1 during the DAWE.**

messaging and database management, do not expect that same analyst to build products or overlays. Get involved with your systems training POI and let the trainers and your analysts know which functions are most important to their part of the unit's mission.

If you cannot afford time to sit through the entire POI for your system, schedule leaders' training. The leaders' training for the DAWE, which took place during the evening due to the lack of classroom space during the day, went through the same tasks as the analyst training. The BCBL-H highlighted those tasks that the leaders would only supervise and went into depth into those tasks that leaders would on occasion perform.

Once your unit has been through initial training, you are on your own for sustainment training. The skills learned on any complex system are perishable. As trained personnel rotate out, the unit must plan to train new soldiers. (This will be an ongoing challenge until the **entire** Army digitizes.)

The 4ID(M) and the BCBL-H trained some essential noncommissioned officers as ASAS "Master Analysts." These master analysts-trainers' charter is to conduct unit-driven training (e.g., Sergeants' Time) to sustain ASAS-RWS skills and to integrate new personnel into the unit's digital TTP.

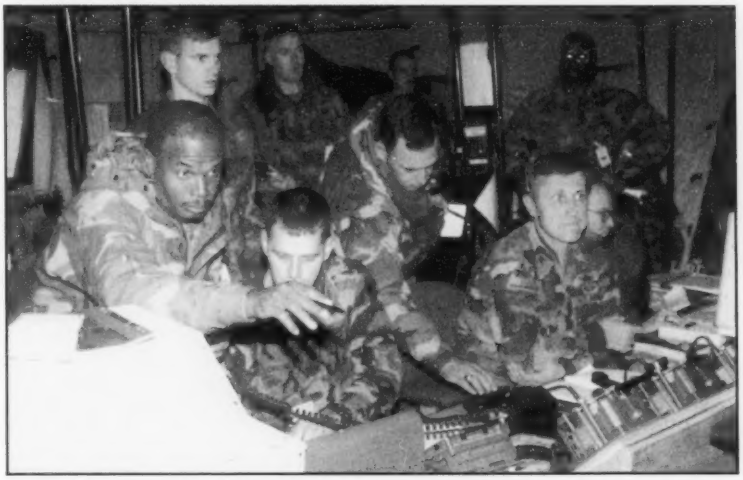
## Know Your Customers

***Send does not equal receive.***
**—Colonel Thomas Goedkoop, Commander, 1st Brigade, 4ID(M), 1995-1997**

In "Intelligence Operations on the Digitized Battlefield" in the July-September 1997 issue of the ***MIPB***, Captain Mike Brady wrote about how he used ASAS-RWS 3.1 and Appliqué to disseminate intelligence products within TF 1-22 Infantry (Mechanized) during the TF XXI AWE. While Captain Brady could produce detailed overlays on the ASAS-RWS, he could not get all of them to the Appliqué, which was the only system available to the company/team commanders. The Maneuver Control Station-Phoenix (MCS-P), the system of the TF commander and S3, could not receive any overlays from the ASAS. Consequently, Captain Brady developed his own TTP to work around some of the technical shortfalls of the systems.

The reality is that the seamless integration of intelligence into the "Relevant Common Picture" has not yet happened. During the TF and Division AWEs, most of the systems we used were still developing and not fully interoperable.

In addition, some commanders will view raw unmanned aerial vehicle (UAV) and the Joint Surveillance Target Attack Radar System (Joint STARS) feeds in their CPs. Right or wrong, the commander or operations battle captain will ask the Intelligence battle captain to interpret and give relevance to raw combat information. Thus, it is more vital now to know where you can get the best intelligence fastest for each part of the battlefield. Digital systems are supposed to make this easier, but only if you learn their capabilities and limitations.



**Activity inside the Aviation Brigade TOC during the DAWE.**

For example, the ASAS-RWS and the MCS-P can exchange friendly and enemy unit information but not overlays and doctrinally correct graphics. However, the mission of getting combat information and intelligence to the decision-makers, killers, and our other intelligence "brethren" is unchanged.

What has changed is the media by which our customers receive information. Some may operate on ASAS-RWS, some on MCS-P, some on Appliqué, etc. It is more important than ever to identify and prioritize the target audience (commander, subordinate unit G2 or S2, higher headquarters, and so forth) for each intelligence product.

There are several important tips I recommend that you consider in sharing or disseminating information. They include the following five suggestions.

**Prioritize who needs information most.** In general, this will be your subordinate element closest to the enemy's direct-fire range. Realize also that the people closest to the enemy's gun tubes will probalby be the people who give you the most timely intelligence.

**Know what system your priority customers are using and tailor your product to them.** Have a plan for analyst-to-analyst communications before each exercise. This can include video

teleconferences and Mobile Subscriber Equipment (MSE) conference calls. The media you use is less important than getting the right information to the right person at the right time.

**Know what communications pipeline is transmitting your information.** This subtlety often eludes the best of us. You can build great graphics with imagery, put on the unit logo and MI crest for visual effect, and post the product to a homepage but you trade speed of retrieval for the fancy effects. If your customers do not have a hardwired local area network or satellite link to you, they will be cursing by the time they download your product. For example, if a distant station is using the MSE to connect with you, keep your product simple so the customer can quickly see it and use it.

**Get a return receipt or verbal acknowledgment that your intended audience read and understood your information.** This is no small issue. Corps and division ACEs and the EXFOR brigades use homepages to disseminate intelligence products, such as intelligence summaries and situation templates. These are powerful tools, but there is frequently no mechanism or device in place to ensure that your important customers received the information on a timely basis.

**Place content over form.** Do not confuse better capabilities to build great-looking products with better intelligence. If your product just looks good but is not good in content, commanders will give you immediate feedback. Decisionmakers still want solid analysis so they can win and spare lives on the battlefield.

## Know Your Contractor

The introduction of new technology to the Army does not mean that there is a concurrent introduction of technical expertise. Complex systems, especially the prototype systems used for Force XXI, require specialized technical support. The people that fill this requirement are civilian contractors.

The image of a contractor that appears in many military minds is that of a used car dealer trying to sell a '63 Edsel as a 21st Century marvel. However, the people providing direct technical support, many of them Army veterans and retirees, are essential members of the intelligence and battle command teams. During the TF XXI AWE, hundreds of contractors deployed to Fort Irwin, California, with the 1st Brigade, 4ID(M). Many of them spent three and a half weeks "in the box" to provide the required "-20 and -30 level" maintenance on the Force XXI prototype systems.

Building a good working relationship with the civilian support personnel is a new challenge. To help make this relationship work, consider the following:

**Add contractor support to your pre-deployment or pre-exercise checklist.** The requirement to plan for timely and synchronized support has become more important in the operations planning process. Before any training event, outline who will support you and how you will find them when you need them. This is not any thing new, other than that the people providing direct support maintenance wear jeans rather than battlefield dress uniforms.

**Realize that contractors manage their time differently.** Contractors are not subject to a six-week lock-in of major training events. This can create some tense moments---a contractor who needs to work on equipment or software will often need access to military vehicles and to have soldiers present. Some will call the day before to notify you of what they need. A battle captain and, more often, a commander must lay down a firm rule about "no notice" and "short notice" contractor requests. Another important rule is to avoid work during off-duty hours and training holidays: allow this only by exception. Fortunately, most contractors will understand and will attempt to work into your training and maintenance schedule.

**Realize that contractors have many of the same goals as you do.** All technical support contractors want to see your mission succeed---their economic well being is tied to your success. If you find a common ground, you can avoid considerable tension. Most important, provide recognition. Civilian personnel that do good work for the Army deserve compliments sent to their bosses. (The same is true for complaints.) Doing this costs you or a commander little more than the time spent sending an E-mail message or making a phone call; the return on that cost is many times greater.

## Conclusion

The pace of change in the world and in the Army is unpredictable at best. The Army's senior leaders have provided some direction, but that guidance is based on what we know today. Our missions are evolving as fast as the technology we are developing to support those missions. We can count on the world and the Army growing more complex. How we choose to adapt to the reality of change will determine our success on the next battlefield.

**Endnote**

1. Microsoft® PowerPoint™ is a software program trademarked by the Microsoft Corporation.

*Captain Kris Muench serves as Assistant G2, Operations, for the Assistant Chief of Staff, G2, III (U.S.) Mobile Armored Corps, Fort Hood, Texas. He previously served as Assistant Brigade S2 for 1st "RAIDER" Brigade, 4ID(M) . He was a Battle Captain for both the TF XXI and the Division XXI AWEs. He has a bachelor of arts degree in Public Policy from the University of Pennsylvania. Readers can contact him at (254) 287-8884, DSN 737-8884, or via E-mail at muenchk@hood-emh3.army.mil.*

# Space Systems Expertise for the 21st Century National Systems Development Program

**by Mr. Alfred Smith and Captain Hermann G. Hasken, III**

The Army's dependency on non-conventional, overhead broadcast intelligence systems is increasing. This has resulted in the need to build a cadre of "space smart" collection management (CM) officers with the ability to task national space-borne systems, pull data from national databases, and coordinate to have it fed to tactical user common systems.

In 1991, the U.S. Army Intelligence and Security Command (INSCOM) tasked the 704th Military Intelligence Brigade to build a professional development program for officers designated to work in space systems intelligence collection, operations, and mission management. The result was creation of the National Systems Development Program (NSDP). This one-year intensive academic and site-orientation program is specifically designed to train officers in signals intelligence (SIGINT) and imagery intelligence (IMINT) CM and site operations (see Figure 1). The program also requires a subjective competency assessment at the end of the program to ensure that INSCOM is sending well-trained officers back to corps as collection managers.

Photo courtesy of INSCOM PAO

Major Donald Hodge accepts his NSDP graduation certificate from then Brigadier General John Thomas, INSCOM Commander, in a ceremony on 30 September 1997.

## NDSP Training Strategy

The NSDP's primary focus is to train officers to leverage non-conventional, overhead technologies in support of decision-makers at the strategic, operational, and tactical levels. It also provides Army and national elements with officers that are knowledgeable in the area of specific-source intelligence: in short, who to go to for what type of intelligence collected from what specific national asset. NSDP graduates report to their units with a wealth of useful sources and points of contact at different programs, offices, and activities. The training program also gives the NSDP graduate considerable knowledge in leading-edge digital communications,data feeds, and the communications architecture; CM principles and practical application; spacecraft orbitology; and also the Tactical Exploitation of National Capabilities (TENCAP) Program user orientation.

Specific training includes a variety of self-paced and formal classroom instruction at the National Cryptologic School at the National Security Agency (NSA) (see Figure 1), resident programs at several other national and Service-specific courses, and at various sites throughout the world. NSDP students are involved in extensive travel throughout the duration of the curriculum, visiting many of the sites conducting non-conventional SIGINT systems CM, reporting, and mission operations. The site orientations provide an in-depth understanding of the functions of various national intelligence

organizations and facilities as well as building a host of contacts that can only be achieved through physical presence at these locations. The training and curriculum also have built-in flexibility based on the previous education and experience of each officer.

## How to Apply

Officers interested in the NSDP can apply by sending an informal letter of application through their chains of command to MI Branch at the U.S. Total Army Personnel Command. Officers are selected by a board convened at PERSCOM and informed by MI Branch, with follow-on permanent change of station moves to the 743d MI Battalion at Fort Meade, Maryland. The 743d MI Battalion, the Army's "Space Exploitation" experts, is the NSDP administrator. Currently, three officers are selected annually.

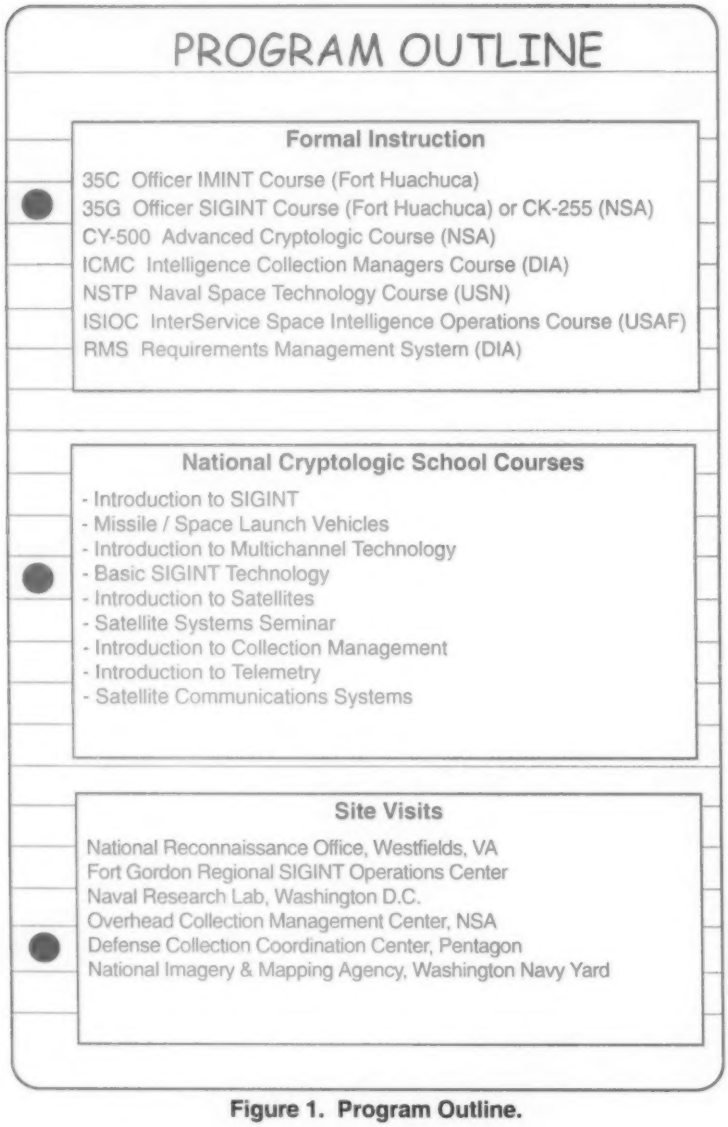



**Figure 1. Program Outline.**

The minimum selection prerequisites include the following elements:

- ☐ Not more than 12 years of Active Federal service.
- ☐ MI Officer Advanced Course (MIOAC) graduate.
- ☐ A tactical assignment history with record of strong performance.
- ☐ Branch-qualified officers with previous company command are preferred.

## Follow-on Assignments

Pending approval by PERSCOM, NSDP graduates will receive the additional skill identifier "3F" pending approval of PERSCOM. This will help assign NSDP graduates in specific space-related operations and CM positions at the corps G2 and higher levels. Headquarters INSCOM, PERSCOM and the Office of the Chief of MI, U.S. Army Intelligence Center and Fort Huachuca (USAIC&FH) are coordinating with units in the field to revalidate or recommend additional positions for these officers. Currently, 42 have been identified in areas such as corps G2 CM sections, overhead systems operations offices, Regional SIGINT Operations Centers (RSOCs), and CM activities throughout the intelligence community.

The assignment possibilities range from Fort Bragg, North Carolina, to Hawaii, and to the Pentagon. Host commands include U.S. Army Forces Command (FORSCOM), INSCOM, and U.S. Space Command (SPACECOM). Due to their special skills and links to the national intelligence community, the program's two most recent graduates have deployed in support of Operation JOINT GUARD as the Senior Collection Manager in Sarajevo, Bosnia-Herzegovina, and as the G2 to the National Support Element in Hungary.

## Conclusion

Are you interested but you think that the course material might be a bit too technically

intimidating? This course was specifically designed to assist both officers with considerable time "in the field" or away from purely SIGINT assignments so that they can return or support the combat commander with national-systems expertise. Most of the recent graduates of NSDP came from a variety of tactical assignments to include Fort Bragg, Germany, and Korea.

The course work is challenging, and the site visits are interesting. The NSDP provides a unique opportunity for officers who are interested in becoming systems smart on 21st century technology today. Recent SIGINT "End to End" studies supported by both USAIC&FH and INSCOM indicate that the skills necessary to ensure the future of the intelligence profession (especially in the area of CM) are staggering. Included in that set of skills is the ability to deliver relevant targetable information directly to the combat commander in near-real time. The NSDP will provide officers with an extraordinary set of skills that will enable them to exploit national space systems on behalf of U.S. forces. Come join the team that has its sights set like its motto, "Beyond All Boundaries." For further information, contact the S3, 743d MI Battalion, at (301) 677-0199 or DSN 923-0199, or S3 Operations at (301) 688-8536, E-mail haskenh @meade-704mi.army.mil.

*Mr. Smith has been reassigned. He was the S3 Operations Officer in Charge in the 743d MI Battalion, and also the Program Administrator of the NSDP. His expertise and in-depth knowledge in the communications architectures of the Intelligence battlefield functional area put him in a unique position to build on the NSDP program and prepare collection managers for the future. Mr. Smith received a bachelor of science in Psychology from Regents University. His previous assignments include positions at the 101st Airborne Division (Air Assault), U.S. Army Central Command staff, and 10th Mountain Division (Light), with whom he deployed to Saudi Arabia, Haiti, and Somalia.*

*Captain "Herm" Hasken currently serves as the Battalion S3 for the 743d MI Battalion. Before his assignment as Battalion S3 of the Army's Space Exploitation Battalion, he graduated from the National Security Agency's Junior Officer Cryptologic Career Program (JOCCP). CPT Hasken recently returned from his deployment in support of Operations JOINT ENDEAVOR and GUARD. His numerous assignments include Company Command and Assistant J3 at the Kunia RSOC, and G2 Staff, 82d Airborne Division during Operations DESERT SHIELD and DESERT STORM. He received a bachelor of arts in International Relations from Texas A&M University, and is currently pursuing a Master of Science in Information Systems Management from Central Michigan University.*

# A Revolutionary Targeting Concept

## The Corps Level Forward Sensor Enclave

by Captain Chris R. Lindstrom

*At 0530 hours, the morning fog rolls back gently over the low lands of a tropical joint area of operations. The sun rises to attention amid clear, moist skies. Soldiers, sailors, airmen, and marines of Joint Task Force 720 stream south, prepared for battle. The senior intelligence officer has the entire Intelligence battlefield functional area (BFA) focused on further refinement of the enemy situation. 0600 hours: the Corps long-range reconnaissance and surveillance patrols (LRSC) have eyes on target. 0610 hours: the LRSC Team 3 reports a SCUD-B launcher at grid location NE 12345678 to the Forward Sensor Enclave (FSE). 0615 hours: the FSE directs a loitering unmanned aerial vehicle (UAV) to the grid point. 0620 hours: the UAV is on station over the reported target. 0622 hours: UAV telemetry verifies the grid reported by the LRSC team. 0623 hours: the FSE, using the All-Source Analysis System (ASAS) Remote Workstation (RWS), nominates the time-sensitive target directly to the Deep Operations Coordination Cell (DOCC). Minutes later, ordinance is delivered on target. 0630 hours: the SCUD-B has been destroyed.*

This is a typical event in the newly created FSE, which belongs to the 525th Military Intelligence Brigade (Airborne) at Fort Bragg, North Carolina. In January 1998, the 525th MI Brigade established the FSE with a simple charter: narrow the time gap from "sensor to shooter" and "sensor to sensor" in the cross-cueing role. The FSE, by definition, is an extension of the corps collection manager (CM). It is a small nucleus of command and control charged with providing focused mission management of the corps' sensors and preprocessors focused on high-payoff targets (HPTs).

### Finding and Influencing the Enemy

MI is about finding the enemy and targeting either his will to fight or his ability to fight. It is precisely this requirement that lead to the creation of the FSE. Detecting the enemy, tracking him, and conducting battle damage assessment is our job. We have several tools to accomplish these missions. From powerful sensors to preprocessors, our equipment represents the cutting edge of technology. Our current intelligence architecture does not exploit the ability to extract and refine focused combat intelligence at the preprocessors to achieve timely and targetable intelligence. In recent years, as technology has matured, this information flow has grown exponentially. While our processors have kept the pace, sorting through and making sense of the volumes of combat information remains a significant challenge.

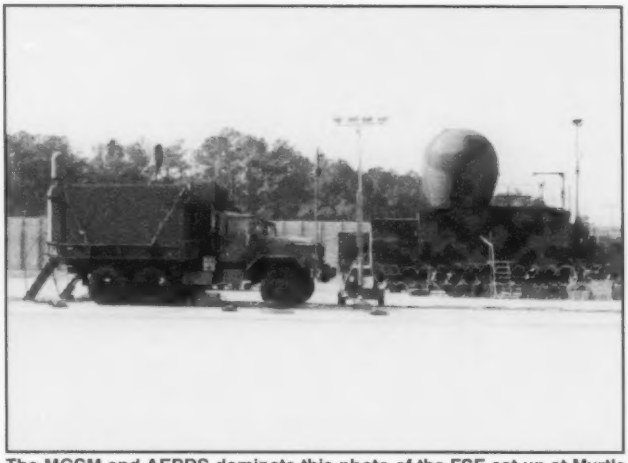
The FSE is a revolutionary concept designed and executed by the 525th MI Brigade (Airborne). The enclave itself consists of the:

- ☐ Guardrail Common Sensor (GRCS).
- ☐ Guardrail Integrated Processing Facility (IPF) for processing signals intelligence (SIGINT).
- ☐ Advanced Electronic and Processing Dissemination System (AEPDS) for processing all national SIGINT.
- ☐ Mobile Imagery Exploitation System (MIES) for processing all national IMINT.
- ☐ Enhanced Tactical Radar Correlator (ETRAC) as the downlink for the U2 platform's Advanced Synthetic Aperture Radar (ASARS).
- ☐ Common Ground Station (CGS) for processing Joint Surveillance Target Attack Radar System (Joint STARS) moving target indicators (MTI) and synthetic aperture radar (SAR) imagery.

## First FSE Use

The FSE was first employed during Joint Task Force Exercise 98-1 (Purple Dragon). JTFEX 98-1 was a U.S. Atlantic Command-sponsored exercise that took place from 12 January 1998 through 5 February 1998. This exercise was a Tier II[1] force-on-force exercise involving all of the Services. The FSE deployed to the intermediate staging base located at Myrtle Beach, South Carolina, to set up operations. The scenario was built in two parts, one of which is discussed here. Part I of the JTF 840 (XVIII Airborne Corps) Operations Order, which fell under Phase IIIa of the Operation (Set Conditions), was constructed as a test to validate our ability to "narrow the gap between sensor and shooter and to conduct near-real-time sensor-to-sensor cross-cueing." For this phase, we received two additional sensors not organic to the brigade: the Pioneer UAV from Naval Detachment VC-6 (Patuxent River, Maryland) and the P3 Orion from Special Projects Patrol, Squadron One (Brunswick, Maine). Both of these platforms brought electro-optical sensors to the fight. We established SCUD-B surface-to-surface missile mock-ups, live maneuver forces, and an SA-6 surface-to-air missile fixed site, all at different geographical areas, to provide a more realistic target set.

One by one, each target was detected, tracked, and nominated for targeting. At each location the FSE proved repeatedly that its concept was valid, and that it could significantly reduce the time gap between detection and nomination by conventional means. When targetable resolution was not initially obtained from the first sensor to detect a target, the FSE redirected another to that location and quickly obtained the required accuracy.



SPC Thomas M. Ryle 1st COSCOM PAO

**The MGSM and AEPDS dominate this photo of the FSE set up at Myrtle Beach Jetport for JTFEX 98-1.**

## The FSE Concept

Very simply put, the FSE provides a level of focused mission management of the corps' critical sensors that was not possible using traditional collection management procedures. Given the variety of responsibilities and duties levied on the collection management section in a corps ACE, it is not possible for the section to intensively manage every active sensor. The FSE's focus on these assets allows the CM to fully exploit the capabilities of each sensor and, in the end, to produce more targets to attack with ordnance or electronic attack (EA). These additional targets come from a shortened sensor-to-shooter timeline and from the ability to fully exploit HPT-focused combat intelligence.

We have established a new management tool that has created a concurrent path of information flow. This path complements the traditional collection and targeting process by putting a second set of "eyes" on the targets of the greatest significance. The traditional flow of data is uninterrupted from the sensor to the preprocessor, into the respective single-source enclave, then to the all-source enclave, and finally to the targeting workstation in our Analysis and Control Element (ACE). Our new path centers on locating all of our preprocessors in one geographical area. This enables our operations van to synthesize the information as it comes in, looking specifically for HPTs. When an HPT is detected, an operator can nominate it within seconds to the targeting cell at the ACE or directly to the targeteers in our Corps DOCC. This new flow can save minutes, if not hours, over the traditional targeting process. Of course, through remote operations, the FSE is not dependent on one geographical area for collocating all of its organic sensors and preprocessors. We can design a variety of packages that would permit remote operations from split bases around the world. While this hunt for HPTs is ongoing, the traditional flow of data into our ACE continues and the traditional target nomination processes remain undisturbed.

## FSE Resources

The FSE, like most military organizations, is driven by METT-T (mission, enemy, terrain, troops, and time available). We deployed all of the organic brigade assets to Myrtle Air Station, South Carolina, for the FSE's first test. These assets included the ETRAC, MIES, AEPDS, CGS, the Medium Ground Station Module (MGSM, a CGS precursor), the TROJAN Special Purpose Integrated Remote Intelligence Terminal (TROJAN SPIRIT II or TS II), and the GRCSs with their associated IPFs.

In the center of the enclave was our operations van and an Administrative/Logistics Operations Center for administrative and lo-

gistics support. The operations van served as the FSE nerve center for information flow. Members of the 319th MI Battalion staff and terminal operators from the respective systems operated this van. We designed the van to include a remote display and/or processor for each of our systems.

For security reasons, the van was divided into two sections: sensitive compartmented information (SCI)—the AEPDS, ETRAC, and the Joint Worldwide Information Communications System (JWICS)—and collateral—Secure Internet Protocol Router Network (SIPRNET), ASAS-RWS, CGS RWS, and UAV terminal. These systems provided the following:

- The AEPDS workstation provided us access to all national-level SIGINT data, and included the same functionality resident in the AEPDS proper.
- The Remote Terminal Operations Display from the ETRAC brought in the live U2 downlink. This terminal was a dumb client slaved off a host in the system itself, but it could be controlled with a telephone call to the preprocessor van.
- The JWICS terminal gave us access to INTELINK and other SCI databases.
- The SIPRNET terminal brought in INTELINK-S and access to all other collateral databases.
- The ASAS-RWS (Warlord Notebook variant) was responsible for processing target nominations, tracking the friendly situation, and displaying the current enemy situation.
- The CGS RWS displayed MTIs from Joint STARS and SAR imagery.
- The UAV display terminal used off-the-shelf hardware and software to bring in a real-time video display from the electric-optical sensor on the UAV.

During Phase III of this particular exercise, we also had the downlink terminal for the P3 Orion. This terminal functioned much like the UAV display by bringing us a video feed directly from the aircraft, and permitting us to dynamically retask the sensor to look at particular areas of interest. These remote terminals provided us with real-time access to every preprocessor as it was receiving information from its respective sensor(s).

At the center of FSE operations are soldiers. Soldiers who are monitoring the flow of information from each sensor as it arrives at its respective preprocessor. These soldiers are busy providing "terminal guidance" to their sensors, narrowing their focus on the commanders' HPTs. This is the crux of FSE operations.

## Mission Threads

A comprehensive FSE battle rhythm was designed to combine the processing power of our systems with the intelligence skills of our operators. This rhythm addressed our collection focus as prioritized by the Corps CM. Our top priority was to ensure that every operator understood specifically where we were focusing our sensors, what we expected to detect (our HPTs), and when the sensors were operational. We then reviewed the operational status of each sensor and preprocessor, and concluded with an operational update on the exercise. We conducted these updates each morning for the oncoming day shift, and each evening for the night shift.

We conceived a process we refer to as "Mission Threads" to focus and refine each HPT. One of these threads is depicted in Figure 1; it indicates our approach for detecting, tracking, and assessing a particular target. In this case, it was a real SCUD-B located on Fort Stewart, Georgia. We allocated two sensors against this target: a corps LRSC team and a Pioneer UAV. In this example, our tip-off came from the LRSC team; they radioed the spot report to their company operating base (COB) at Fort Bragg. From there the report went to the Joint Intelligence Support Element (JISE) also at Fort Bragg, which in turn passed it to the FSE tactical operations center (TOC) at Myrtle Beach. Within minutes of receiving this notification, the FSE redirected the UAV over the target location; seconds later the

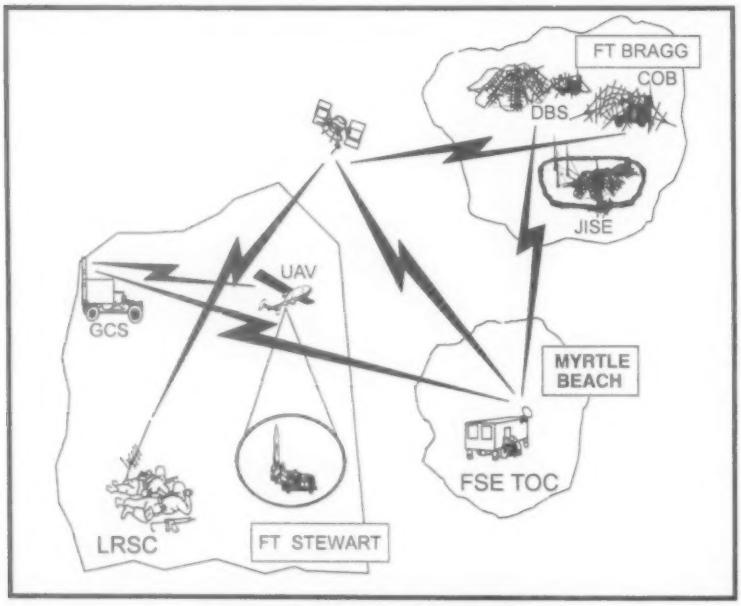
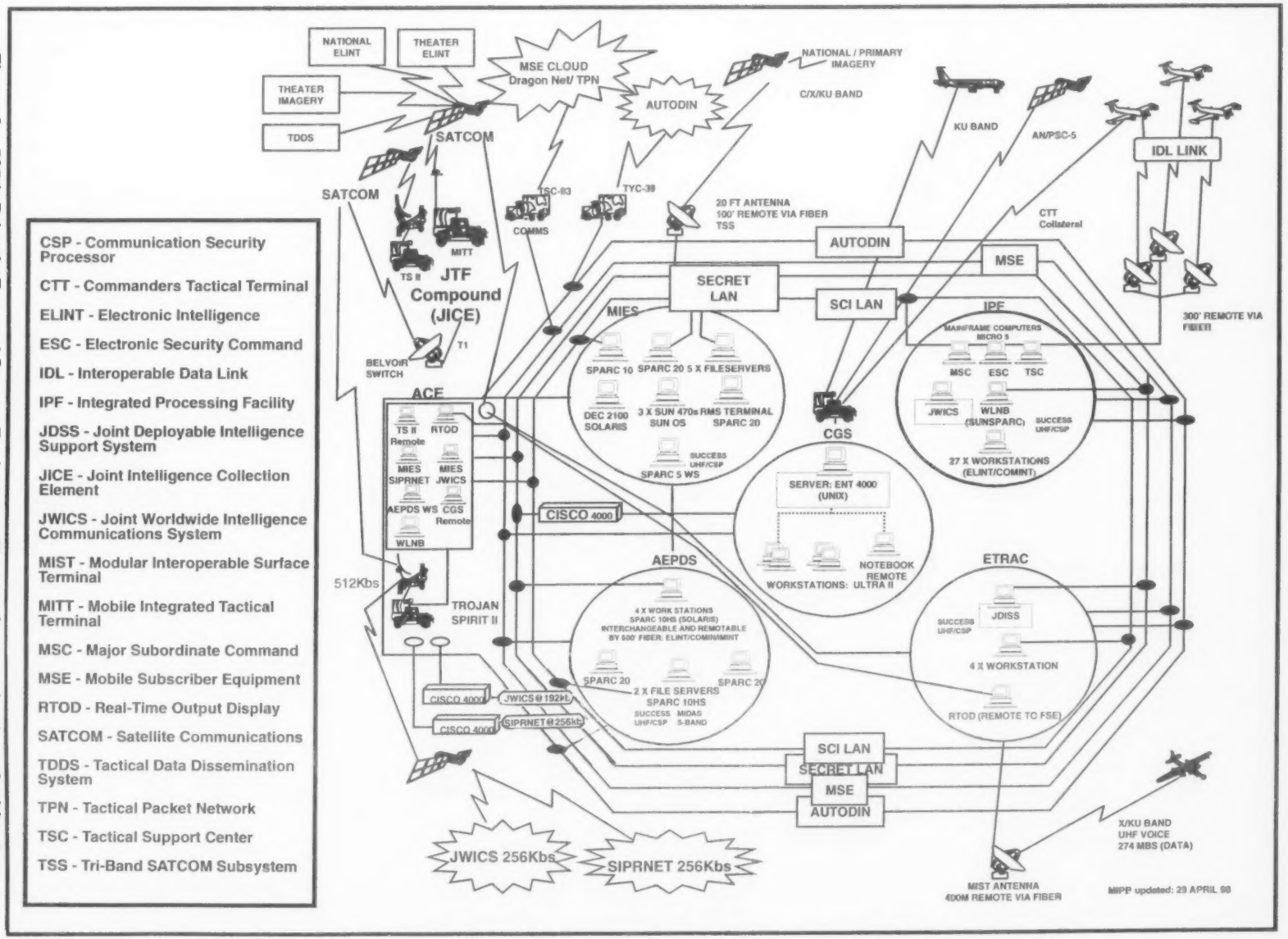



**Figure 1. FSE Mission Thread.**




CSP - Communication Security Processor

CTT - Commanders Tactical Terminal

ELINT - Electronic Intelligence

ESC - Electronic Security Command

IDL - Interoperable Data Link

IPF - Integrated Processing Facility

JDSS - Joint Deployable Intelligence Support System

JICE - Joint Intelligence Collection Element

JWICS - Joint Worldwide Intelligence Communications System

MIST - Modular Interoperable Surface Terminal

MITT - Mobile Integrated Tactical Terminal

MSC - Major Subordinate Command

MSE - Mobile Subscriber Equipment

RTOD - Real-Time Output Display

SATCOM - Satellite Communications

TDDS - Tactical Data Dissemination System

TPN - Tactical Packet Network

TSC - Tactical Support Center

TSS - Tri-Band SATCOM Subsystem

Figure 2. 525th Brigade Forward Sensor Enclave Intelligence Communications Architecture.

UAV telemetry confirmed the location and the nomination process began. SCUDs had been designated time-sensitive targets, which meant that our nomination went directly to the DOCC. In this particular thread, the time from detection to nomination was less than 10 minutes, but many HPTs were nominated in less than 3 minutes from detection.

## Layout of the Enclave

Terrain allocation was an important issue as we sought to minimize our footprint while maximizing our functionality. Our layout for this deployment established one tactical secure compartmented intelligence facility that included both collateral and SCI areas, and shared a common entry control point. Wherever possible, antenna groups and generators were positioned outside the wire borders of the FSE for easy access. The enclave consisted of two sections: one half contained our Tactical Exploitation of National Capabilities (TENCAP) assets, and the other included our GRCS IPF.

## FSE Communications Architecture

The complexity of the FSE demanded a thorough review of existing intelligence communications architecture; Figure 2 shows the final architectural design. At the risk of oversimplification, this design centered on six clusters or consumers within the enclave: IPF, ETRAC, AEPDS, MIES, CGS, and the FSE TOC operations van. We established three internal local area networks: SIPRNET, JWICS, and AUTODIN (automatic digital network). We located the SIPRNET and JWICS hubs inside the operations van for administration and management, while the AUTODIN was managed from a central switch inside the wire barrier. In addition to these networks, we also brought in a redundant SIPRNET path via the Mobile Subscriber Network (MSE)/Tactical Packet Network (TPN). Our reach-back capabilities were fairly robust using a TROJAN SPIRIT II for the principle JWICS and SIPRNET provider, an AN/TYC-39 message switch for AUTODIN, and an AN/TSC-93 multichannel satellite for the MSE/TPN. Also depicted in this chart are the various sensor links and our SUCCESS (Synthesized, UHF (ultra-high frequency), Computer-Controlled Sub- system) radio path resident with each of our TENCAP systems. This architecture was highly successful and remained remarkably stable throughout the operation.

SSG Mark Schulert HHD, 525 MI Bde (AEN)

**The CGS, MGSM, RL Antenna and AEPDS "Bubble" are all shown in this shot of the FSE at Myrtle Beach Jetport in Support of JTFEX 98-1 Purple Dragon.**

## Conclusion

In our judgement, the FSE is an organization whose time has come. The maturity of modern sensors and preprocessors has redefined our battlespace. We now have the capability to reach deeper into an area of responsibility than ever before, seeking out targets that meet our HPT criteria. Focusing our sensors and collection efforts on these target sets is our mission. Our method is establishing a concurrent data path whereby HPTs can quickly and accurately be detected, tracked, delivered, and assessed. JTFEX 98-1 (Purple Dragon) validated this concept for the Joint Task Force Commander, and brought home several significant points. We must reconsider our MI doctrine as it pertains to targeting. This effort should focus on the new capabilities of the FSE. We must also develop enclave packages that support all phases of military operations, from stability and support operations to large-scale war.

Much work lies ahead as we further refine this concept and increase its processing capabilities. In the days and weeks that follow, we will design and implement full tactics, techniques, and procedures for the FSE. We will base this document on our January exercise lessons learned and the responses we receive from the many government agencies and contractors who critically reviewed our procedures. We will seek to increase our communications and network capabilities, and to reduce the size of our footprint. From there, we will analyze our procedures, attempting to fuse our data streams into common pictures of our battlespace, giving us greater target resolution and fidelity. Finally, we will fully integrate the rest of our Corps Intelligence BFA systems and procedures and determine the best solutions for exportation.

**Endnote**

1. A Tier II exercise is a commander in chief-supported Joint Task Force exercise with the training focused on the component level.

*Captain Chris R. Lindstrom is assigned as the Assistant S3, 319th MI Battalion (Air Borne) Fort Bragg, North Carolina, and is on temporary assignment with the USAREUR DCSINT. His previous assignment was as the Force Modernization Officer, XVIII Airborne Corps G2. He has a bachelor of arts degree from Utah State University. Readers can reach him via E-mail at Lindstrc@aol.com.*

### ✻ Change in Office Symbol

Due to the reengineering of the U.S. Army Intelligence Center, the ***Military Intelligence Professional Bulletin*** has a new office symbol. Our new address is Commander, USAIC&FH, ATTN: ATZS-CLM, Fort Huachuca, AZ 85613-6000.

# Mission Rehearsal at CMTC: Operations JOINT ENDEAVOR and JOINT GUARD

**by Major Kathleen A. Gavle**

The Combat Maneuver Training Center (CMTC) has been conducting stability operations and support operations rotations for U.S. and Allied units since 1993. Starting in the summer of 1995, however, the CMTC has played an increasingly significant role in preparing soldiers to deal with the situation in Bosnia-Herzegovina as part of Operations JOINT ENDEAVOR (OJE) and JOINT GUARD (OJG). The CMTC spearheaded the Individual Replacement Training (IRT) that everyone—soldier and civilian alike—attends before deploying. CMTC observer/controllers (O/Cs) have taken their training materials and expertise to various posts in Germany and in the United States to facilitate the creation of other training sites. Additionally, there have been a series of exercises at the CMTC that have become increasingly complex but also more specifically tailored to the units preparing to deploy. These mission rehearsals, the "Mountain Eagle Exercises," have proven valuable to the soldiers of the United Nations' Implementation Force (IFOR) and the Stabilization Force (SFOR). My purpose here is to describe CMTC's contribution to the OJE and OJG mission rehearsals.

## References

An essential piece of any mission rehearsal is accurate replication of the conditions under which a unit will conduct its mission. Initially, we relied heavily on the experiences of the United Nations Protective Force (UNPROFOR) for first-hand appreciation of the environment and of the issues for the region. We also had intelligence that provided a more detailed picture of the issues. Finally, the 7th Army Training Center (7ATC) White Paper, a Mission Training Plan (MTP) for Military Operations Other than War, provided the tasks, conditions, and standards for the fundamental tasks we needed to train for the Bosnia mission. Some of the tasks that received early emphases were establishing a base camp, check point operations, patrolling, and mine awareness.

For OJE and OJG, the critical reference for soldiers to know is the General Framework Agreement for Peace or GFAP. The parties in the Bosnian conflict agreed to comply by the GFAP when they signed the Dayton Peace Accord in November 1995; the mission of the IFOR, and now the SFOR, is to enforce the provision of GFAP and thus provide a secure and stable environment in which the civilian aspects can take hold. Since the North Atlantic Treaty Organization (NATO) mission in Bosnia first began, Task Force Eagle (TF Eagle)—the U.S. contingent—has also developed several important references that the CMTC has used to train deploying soldiers. Every soldier must know the rules of engagement (ROEs) associated with the operation. The 1st Armored Division (1AD) published the TF Eagle lessons learned on a regular basis; they highlighted some of the unique situations for the mission in Bosnia. The **Joint Military Commission (JMC) Policy, Procedures, and Command Guidance Handbook** provides information on the important organizations operating in Bosnia and policy guidelines for enforcing the GFAP. There are several standing operating procedures (SOPs) and operations plans (OPLANs) that the CMTC also uses to help develop the Mountain Eagle training.

Individual expertise comes to a Mountain Eagle exercise in several forms. Several O/Cs draw from their own experiences in Bosnia or from U.N. courses they have attended (see the "CTC Notes" on page 52). Many of the O/Cs have visited TF Eagle units during the Operations to stay current on the situation and the issues confronting the deployed units. The units participating in TF Eagle have generously shared their time and resources to ensure that the CMTC has the expertise and resources needed to conduct a productive mission rehearsal. Both 1AD and 1st Infantry Division (1ID), and their subordinate units, shared their lessons learned, SOPs, briefings, weapons storage site packets, personalities matrices, area assessments, and numerous other specialty products with CMTC. Additionally, the divisions and the 165th MI Battalion provided invaluable assistance in preparing the products and orders to support the training. Civil affairs experts who have dealt with the various leaders and representatives in Bosnia have

coached the CMTC civilians on the battlefield (COB) role players to make their efforts more realistic and productive. Developing a realistic Mountain Eagle environment and scenarios to train units for OJE and OJG has been a team effort among V Corps, 1AD, 1ID, and 7ATC.

## Operational Environment

Because Mountain Eagle rotations are mission rehearsals, the CMTC must understand and replicate as closely as possible the operational environment for each mission. Many of the conditions—base camps, mines, and refugees, to name a few—remain constant, but it is important not to simply rerun each exercise. The conditions CMTC provides in the maneuver area are designed to replicate what the units will experience in Bosnia (see Figure 1). Each Mountain Eagle Exercise is tailored for a specific units' anticipated mission. We want to keep the environment and the issues current so the training is relevant to every soldier.

**Dayton Geography.** The provisions of the Dayton Peace Accord defined specific conditions for the conduct of Operations JOINT ENDEAVOR and JOINT GUARD. The fundamental conditions for the Bosnian area of operations (AO) include an interentity boundary line (IEBL) and a zone of separation (ZOS). The IEBL is the dividing line between the Federation of Bosnia-Herzegovina (Muslim-Croat federation) and the Republika Srpska. It is not an international boundary; it represents a kind of state boundary between two entities of one country. The ZOS is the two-kilometer weapons-restricted zone located on either side of the IEBL.

Understanding the implications of the issues surrounding the ZOS are important to every soldier's mission in Bosnia, so it is essential to replicate that piece of Dayton geography for most of the units training in the CMTC's maneuver box. The heaviest density of mines and unexploded ordnance are concentrated along the ZOS, a threat especially to the units that deployed to establish the IFOR's first base camps and

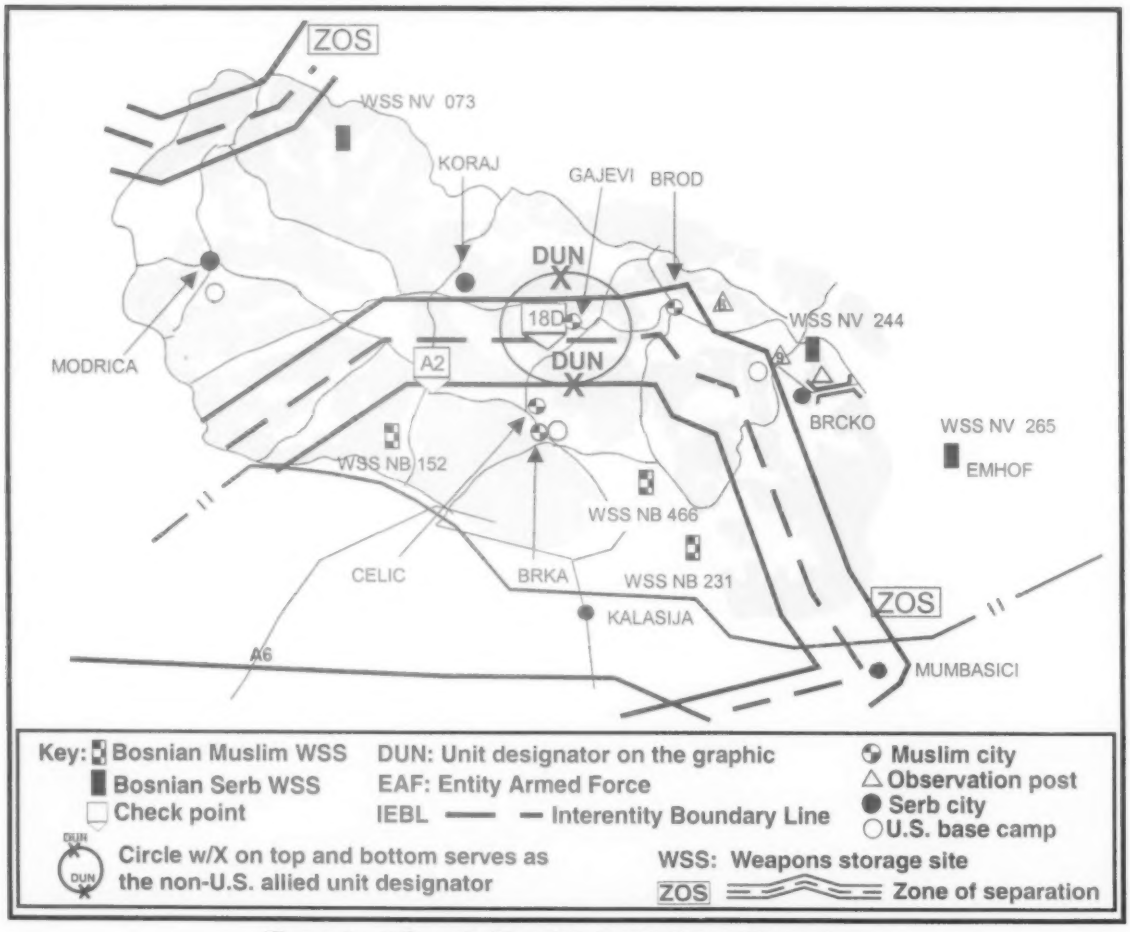



**Figure 1. A Sample Mountain Eagle Area of Operation.**

checkpoints. Although the entities' armed forces (EAFs) have marked or cleared many of the minefields, many unmarked minefields likely remain. Soldiers training in Hohenfels will see the same IEBL and ZOS markers and will encounter marked and unmarked minefields. The ZOS is also a weapons-restricted area, and soldiers need to be familiar with all of the restrictions they are required to enforce.

IFOR soldiers spent months at checkpoints along the ZOS to enforce the GFAP provisions concerning weapons restrictions and freedom of movement; many of those soldiers first did this at Hohenfels. Many towns that were ethnically cleansed during the war lie within the current ZOS and remain hot spots or target areas for resettlement. The CMTC has built Camps McGovern, Colt, and Bedrock, and Tuzla Main. Its mini-MOUT (military operations on urbanized terrain) sites and towns surrounding the maneuver box are designated Tuzla, Celic, Gajevi, Koraj, Dugi-Dio, or Brcko to facilitate training IFOR and SFOR missions. CMTC has also built a "Brcko bridge," constructed checkpoints along the ZOS, built weapons storage sites and created supporting target folders, and established unit boundaries. All of this effort to research and recreate the geographic environment in Bosnia is designed to provide soldiers with as realistic an environment as possible in which to conduct their mission rehearsals.

**Players**. Soldiers deploying to Bosnia are not likely to work in an exclusively U.S. Army environment. There are many other players in this mission. First of all are the parties to the peace accord and their armed forces, the entitities armed forces (EAF). There are three different EAF that soldiers will encounter, the ABiH (Armijia Bosnia in Hercegovina or Bosnian Muslim Army), the VRS (Vojska Republika Srpska or Bosnian Serb Army), and the HVO (Hrvatsko Vijece Obrane or Bosnian Croat Army). Each has its own perception of the war and the current situation, and each has its own agenda in dealing with IFOR/SFOR soldiers.

Other players include the multitude of international organizations operating in Bosnia. Among the agencies with which SFOR has regular contact are the United Nations High Commissioner for Refugees (UNHCR), Organization for Security and Cooperation in Europe (OSCE), International Criminal Tribunal for the Former Yugoslavia (ICTY), and the International Police Task Force (IPTF). As the organization that approves return applications, the UNHCR is the key player for the relocation of displaced persons and refugees (DPRE). SFOR soldiers have been on the scene of many potential and actual incidents as a result of DPRE returns. OSCE had the mandate to supervise Bosnian national elections in September 1996, and it has the mandate to oversee the upcoming municipal elections in September 1997. During the national elections, IFOR had several security related missions. ICTY has been working to obtain evidence to support the war crimes trials at the Hague, with soldiers providing limited support. The IPTF, under a U.N. mandate, monitors and advises local police. IFOR and SFOR have been responsible for providing an environment in which these different civilian agencies operating under the GFAP can accomplish their mission. There are obligations and restraints that soldiers must clearly understand, in accordance with orders and policies such as the JMC Handbook, as they interact with these agencies. As they request convoy security, transportation, guard forces, medical assistance, food and supplies, the CMTC role players ensure they test the soldiers' understanding of their humanitarian obligations and legal restrictions.

Photos by Captain Ted Stuart

**Soldiers practice a media interview.**

The media is an ever-present player in the Bosnian AO. There are American, international, and local reporters, all trying to get their story. In his yellow paper "Media Coverage of Operations and Deployments" dated 8 December 1995, former Chief of Staff of the Army General Dennis J. Reimer told soldiers to sell the Army story—and that is what the training at CMTC reinforces. Soldiers are encouraged to talk to reporters with the proper credentials about what they are doing, consistent with force protection and operational security guidelines, and not to speculate on policy and other events outside of their area of expertise. A friendly and cooperative attitude is encouraged. Some soldiers, especially more senior leaders, participate in radio talk shows and encounter local reporters who are clearly one-sided on any issue. The pressure of the spotlight soldiers receive in training should make their first actual media contact much more professional.

Of course, the residents of Bosnia are also players in the NATO mission. Many local residents work in the base camp dining facilities and concessions or support Brown and Root, whose construction efforts have significantly improved the quality of life for soldiers. Interpreters are attached to every unit, and some help the division translate and understand local news or radio reports. Among the least popular residents are the per-

sons indicted for war crimes or PIFWC, and soldiers in Bosnia have specific guidance concerning the apprehension of recognized PIFWC. With support from many divisional augmentees, CMTC has all of these players available to better replicate the operational environment in Bosnia.

Finally, soldiers work with other SFOR units, many of whom are not U.S. Army soldiers. Within the American-controlled sector alone, there is a Russian Brigade, a Turkish Brigade, and a NordPol (Nordic-Polish) Brigade. During some of the CMTC rehearsals, units have conducted joint patrols and coordination for missions with different armies and even in different sectors. Doing so helps leaders and soldiers appreciate the detail required to successfully execute joint and combined operations.

## The Mountain Eagle Exercise

After setting the proper stage, the heart of a Mountain Eagle exercise is providing each unit with the typical missions and operational tempo for OJE/OJG, culminating in a validation of its combat readiness. The phases of the exercise include a transfer of authority (TOA), daily life and routine operations, and contingency plans.

When a unit ultimately deploys to Bosnia, it conducts a TOA with the departing unit. Initially, IFOR conducted TOA with the United Nations Protection Force (UNPROFOR); SFOR units now conduct TOA with other SFOR units. A good TOA facilitates transition and smooth integration of a new unit into the region, which affects relations with local civil and military leaders, local residents, and international agencies. CMTC obtained some of the TOA products deployed units produced and replicated the most important ones for each Mountain Eagle. Each arriving unit should benefit from the lessons learned of the departing unit and assume its SOPs and data bases. A list of transition products is probably the most important item a unit receives during its mission rehearsal. This tells the staff sections, in particular, what to expect upon arriving in Bosnia and ensures there are no major gaps. The S2, for example, should receive a detailed area orientation, situation briefing, and TF Eagle assessment; should fall in on security SOPs and data bases of weapons storage sites, personalities, and orders of battle; and should receive training on the intelligence architecture unique to the mission in Bosnia. The S3 should be briefed on force protection measures, weapons storage site inspections, convoy operations, the graduated response matrix, and all contingency plans. The engineer should receive the minefield data base and route status information. The outgoing commander should introduce the incoming commander to all of the key leaders in the sector. Although a unit at CMTC can't possibly receive every product a unit produces over a six month deployment in Bosnia, each leader can leave the training area confident he knows what he should see when he arrives in Bosnia.

Upon completion of TOA, units conduct routine peace support operations to become familiar with SOPs and reinforce application of the ROE and policies and procedures. Daily life for OJG soldiers includes base camp operations, weapons storage site inspections, two to four vehicle convoys, and patrols. They may also encounter illegal police checkpoints, witness a demonstration by a group of angry citizens, or notice someone who seems to be surveilling the base camp. Commanders conduct Joint Military Commissions or bilateral meetings with EAF commanders. They also conduct radio talk shows and media interviews. Everyone interacts with some of the many non goverment organizations (NGOs) operating in the region.

Soldiers conduct personal search of prisoners.

While the routine peace support operations develop or refine soldiers' understanding of the ROE and mission guidelines, negotiation skills, and patience, certain problem sets rehearse contingency plans and a unit's combat skills. All missions in Bosnia are conducted as combat operations, and the training at Hohenfels reinforces that. In conjunction with the G2 and senior trainer, the writers create scenarios similar to actual incidents in Bosnia or

worst case ones that could happen if patience, negotiation, and cooperation break down. Such scenarios set the conditions for the implementation of a particular conplan and force the unit to go through the tactical decision making process and execute a battle. Themes or storylines drive this train, and while several themes remain constant throughout each Mountain Eagle exercise, the situation in Bosnia is not what it was in December 1995. SFOR troops have more of an enforcement and sustainment than the implementation mission IFOR had. Some of the themes exercised at CMTC include force protection, NGO/PVO interaction, weapons storage sites, faction confrontation, PIFWC, and resettlement.

Force protection is a consistent theme throughout every mission rehearsal. At the lowest level, it requires soldiers to wear Kevlar, LBE, body armor, and carry weapons in accordance with a force protection posture posted at every base camp TOC and gate. This posture also dictates the minimum number of vehicles required in a convoy departing a base camp. Force protection demands a security plan for a base camp and requires soldiers to know and understand how to implement the ROE and General Order 1. It also demands an appreciation for the threat from mines and unexploded ordnance (UXO) and general situational awareness. From the minute they occupy their base camp at CMTC, soldiers confront all sorts of force protection challenges. COBs will try to conduct surveillance on their camp and maybe try to infiltrate to steal food, fuel, or Class IV items that could be used to rebuild homes. Others will offer soldiers alcohol or try to give UXO they found in a field to soldiers on patrol in a local town. Soldiers may experience sniping, sabotage, or ambushes.

Soldiers have also consistently dealt with NGO/PVO interaction, relocation issues, and weapons storage site inspections during their mission rehearsals. In general terms, these are part of the routine OPTEMPO for units, but they must correctly apply to ROE and possibly conduct some crisis management. An example is a weapons storage site inspection that reveals a discrepancy. For each weapons storage site CMTC creates at Hohenfels, the writers prepare a site folder very similar to what an S2 in Bosnia will have. As a unit plans to conduct a site inspection, the S2 briefs the commander of the inspecting unit, telling him what he should expect based on the last inventory and any recent intelligence. Although it is a routine operation for units in Bosnia by virtue of being conducted regularly as part of GFAP enforcement, each inspection is a very deliberate process with the potential for confrontation. If the equipment or ammunition on hand does not match the inventory, the inspecting commander must determine what action to take. Did his unit miscount? Can the EAF commander show proof of SFOR-approved training ongoing that accounts for the discrepancy? Or has the unit likely moved the equipment without authorization? SFOR has the authority to confiscate anything in excess of what the previous inventory holds and also to confiscate other items in response to missing equipment or ammunition. Soldiers who have participated in earlier Mountain Eagle exercises have told CMTC visitors to Bosnia that actually conducting such a confiscation during a mission rehearsal would make them much more confident as they conduct the first such operation down range.

The scenarios that take a unit to full combat, such as factional confrontation, are not necessarily events that SFOR leaders expect to see happen. By training for the worst possible scenario, however, and practicing warfighting skills, soldiers should leave CMTC prepared for anything from mass demonstrations to a hostage situation to a stand-off between two EAF. A sample scenario spins off from a DPRE relocation. Settlers of one ethnic group bring building materials to a town in preparation for reconstruction. Another group begins propaganda and demonstrations against the first and ultimately destroys the materials. Military forces deploy to protect the efforts of the first group, posing a threat to the second, and ultimately military forces deploy to support them, as well. The two armies face off, and sooner or later, someone fires the first shot that provokes a battle.

## Mission Ready

Soldiers depart CMTC with a better understanding of the environment into which they are deploying, from the mine threat to the ethnic tension to the peacekeeping tasks to the potential for conflict. They get the opportunity to practice the skills that are essential to stability and support operations, such as negotiation and demonstrating patience and working with NGOs. The staffs get the opportunity to iron out their procedures for tracking Task Force operations on a daily basis and to prepare similar contingency plans. Soldiers have told us that their training at CMTC was extremely beneficial. OPTEMPO in "the box" is typically much higher and life generally harder than they have experienced down range, so they have felt pretty confident as they conduct operations. Mission accomplished.

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# Battle Damage Assessment: The Road to Victory

**by Chief Warrant Officers Two Tony E. Meade, James A. Hopkins, and Miles M. Fujiwara**

"The best BDA reporting in any Battle Command Training Program warfighter exercise ever!" was an often heard comment from the BCTP observer/controllers (O/Cs) during the November 1997 Division XXI Advanced Warfighting Experiment (DAWE). The 4th Infantry Division (Mechanized) (4ID(M)) ad hoc BDA cell's reporting was within four percent of the actual numbers for most of the maneuver units and within ten percent on the other elements. This unprecedented reporting accuracy contributed to an understanding of BDA concepts and to the eventual excellent working relationship between the BDA cell and the brigade S2s.

BDA is the timely and accurate reporting of damage resulting from the application of military force against an objective. The purpose of the BDA effort is to provide an accurate enemy strength assessment so that the commander can make informed decisions. Indeed, many priority intelligence requirements (PIR) are based on the BDA. The BDA process is one of the six intelligence tasks.

Operation orders (OPORDs) and contingency plans (CONPLANs) address BDA requirements, responsibilities, and procedures as an integral component of the targeting process. These documents establish the commander's BDA structure and procedures, and they define the information flow. Although BDA is primarily an intelligence responsibility, it requires extensive coordination with operational elements to be effective.

## Important Players in BDA

These players in the BDA process are the division commander, G3, G2, fire support officer (FSO), air liaison officer (ALO), and the collection manager (CM). These essential players have certain duties and responsibilities to make BDA a functional, successful process. The commander provides the guidance, priorities, and the concept of the operation that focus the BDA effort, and directs the BDA process through the G2. The G3 integrates the results of BDA into current operations and future planning processes, and ensures that support for the collection of BDA information is incorporated into current orders and future plans.

The G2 and division CM develop and recommend the PIR and information requirements (IRs) including BDA requirements, tasks, and collection support from the appropriate units or agencies. These IRs are needed to satisfy the commander's targeting and BDA objectives in the context of the overall intelligence planning and operational requirements. The G2 oversees BDA for the commander and disseminates the results; the G2 also determines the effects of an executed course of action (COA) on enemy strength and combat effectiveness. Based on this assessment, the G2 then refines enemy COA recommendations to the commander, and (working closely with the G3, FSO, and ALO) recommends specific targeting requirements based on precedence.

## BDA Principles

There are several principles we feel are essential for effective BDA:

- ☐ BDA must measure things that are important to commanders, not make important the things that are easily measured.
- ☐ BDA reporting must be objective. When the cell receives BDA-related reports or products, it should verify the conclusions and "weed out" the redundancy and conflicts in the reporting.
- ☐ The degree of reliability and credibility of the assessment relies largely on the collection resources.
- ☐ Division and brigade commanders and their staffs should conduct a front-end analysis to identify the precise BDA efforts required to accomplish the mission.

## What BDA Means at Different Echelons

The size and composition of the intelligence staff element responsible for BDA varies at each Army echelon. At the operational level, BDA provides commanders with detailed estimates of the campaign's effects to determine how well they are doing. Dedicated BDA cells are formed at corps level and above in either the All-Source Intelligence Team (ASIT) or the targeting section.

At the tactical level, commanders use BDA reporting to acquire a timely and accurate picture of the enemy's strength and the damage the friendly forces have inflicted on the enemy units. This helps commanders determine whether their targeting efforts were successful or if they need to re-target specific units. Although personnel are not dedicated to this function at the tactical level, the capability to create an ad hoc BDA cell is more likely to occur at the division's main command post (D-MAIN).

At the division, the tactical SOPs delineate the circumstances under which an ad hoc BDA cell should be formed and when the ASIT should perform BDA within the analysis and control element (ACE) and G2 operations element. The ACE is the

focal point for combat information and intelligence information, and the BDA analytical effort should be conducted at this tactical echelon only.

BDA produced at the division focuses on the division commander's requirements and on providing BDA data and reports to the corps for incorporation into their battle damage assessments. BDA must have the following to be effective:

- ☐ Commander's requirements and objectives.
- ☐ OPORD/CONPLAN.
- ☐ Enemy order of battle (OB) database (down to battalion level).
- ☐ Ability to communicate digitally with subordinate and higher echelons.
- ☐ Effective means of accessing databases from the ATCCS systems (ASAS, Advanced Field Artillery Tactical Data System (AFATDS), Maneuver Control System (MCS), etc.).

The brigade and battalion tactical operation centers (TOCs) are not resourced to support BDA as a separate function and do not have BDA cells or dedicated personnel. Efforts at these echelons focus on assessing and reporting the physical and functional damage done to enemy forces they are or will be fighting.

In the brigade, the S2 may assign one of the four analysts in the analysis control team (ACT) to support the commander's BDA requirements. The S2 focuses on performing the limited analysis necessary to answer the commander's BDA-related PIR and on providing support to subordinate units' S2 cells. The time, personnel, and assets available limit the BDA process. Thus, the S2 must concentrate on analyzing enemy combat system losses, reporting the numbers and types of enemy forces, and personnel casualties or equipment damaged or destroyed.

At the battalion, the S2 has a small battlefield intelligence coordination center (BICC). The BICC has three analysts to support all of the commander's intelligence, targeting, and BDA requirements. To maximize available assets, the S2 must integrate the BDA requirements with other targeting and intelligence PIR and answer the BDA during intelligence preparation of the battlefield and situation development. The focus is on analyzing the enemy's combat losses. The S2 concentrates on reporting the numbers and types of enemy casualties and equipment damaged or destroyed, and does only enough BDA analysis to answer the commander's BDA-related PIR.

## BDA During the DAWE

In the discussion of our BDA in the November 1997 DAWE, we present some techniques that led to our success. Then we discuss personnel, equipment, database management, and reporting procedures and offer some suggestions.

Some of the techniques that led to our successful BDA include the following six items.

- ☐ BDA requirements must be included in the PIR and IRs.
- ☐ The CM must task organic assets or request data from higher echelons' collection to satisfy the commander's BDA requirements.
- ☐ The unit must establish a procedure (coordinated through the Division ALO and G3 Air section) to ensure that pilot reports and operation reports are made available to the BDA analysts.
- ☐ There must be a current enemy order of battle (OB) database—down to battalion level—incorporated into a spreadsheet tied to a graphics program.
- ☐ The BDA element must assess incoming reports and develop the situational status, an ongoing task.
- ☐ The cell must develop BDA graphics and disseminate them. We used the Division G2 Homepage as a dissemination system.

**Personnel**. The Division created an ad hoc element by taking signals intelligence personnel (four warrant officers and four enlisted soldiers) to run the cell, develop the TTP, and write an SOP for the AWE. The BDA process (as developed during the 1997 DAWE) was a 3- to 4-soldier operation per shift. All of the soldiers were proficient in both Microsoft Excel, and PowerPoint.[2]

The officer in charge (OIC)—a warrant officer—maintained situational awareness for friendly and enemy forces, specifically tracking the deep strikes, aviation in-flight reports, penetration box (PENBOX) execution, support by fire missions, and artillery counterfire missions. This included coordination with higher headquarters, adjacent units, and subordinate elements. BDA is often an afterthought for units; for them, coordination and pulling information from higher, adjacent, and lower echelons is essential.

The BDA noncommissioned officer in charge (NCOIC) must have a good working knowledge of the automated BDA programs and the connectivity architecture. This soldier ensured that established procedures were followed and that the intelligence information flow continued despite problems associated with equipment, personnel, and reports. The NCOIC coordinated among echelons to facilitate quality BDA reporting from subordinates and receipt of shared analysis from higher echelons. This NCO must be proficient with computer systems and have the in-depth knowledge of enemy doctrine to deconflict reports from subordinate or higher units.

The cell also included the BDA specialists. These soldiers input information into the BDA database and updated the graphics used on the Division G2 homepage and for briefing the commander (see Figure 1). The specialists must also be proficient

in the above named programs and architecture and have a basic understanding of enemy doctrine.

We recommend that an experienced first lieutenant or captain (perhaps from G2 operations), familiar with the enemy and friendly OB and doctrine, be assigned as OIC. The enlisted personnel should be intelligence analysts (96B) because of the detailed knowledge required on enemy OB and doctrine.

**Equipment**. The equipment the BDA cell used was a stand-alone computer with a printer using Microsoft Office 97 software. This allowed the BDA analysts to automatically convert the PowerPoint graphics to HTML (hypertext markup language) files, the language used on the homepage. The operator then downloaded the files to a floppy disk and uploaded them on an RWS to post them on the G2's homepage. Subordinate echelons obtain current enemy assessments and remaining combat strength figures through accessing this homepage.

Use of an ASAS-RWS is required due to the access needed to data from the ASAS, AFATDS, MCS, and other ATCCS systems. Microsoft Office with PowerPoint 97 is our recommended software package because it allows the immediate conversion from PowerPoint graphic to HTML. It is more efficient to post to the division homepage from the workstation one is using rather than having to take a floppy disk to an unoccupied ASAS-RWS terminal. Ideally, the ASAS-RWS would be upgraded so that the BDA process is automated and digital, not analog.

**Database Management**. The BDA databases encompassed OB down to battalion-level units that can influence the area of operations as defined by the commander and G3. Building the spreadsheets takes approximately one full month of focused effort. Each file represents a corps-size unit. The spreadsheets are divided into two parts: individual unit worksheets that display personnel and equipment casualties and "roll-up" worksheets that summarize the data from the individual sheets (see Figure 2). To reduce possible human errors, data can be entered in the highlighted rows only. We printed all of the individual worksheets for the BDA log before deploying and used the log to track the remaining equipment in each unit. Then we linked these worksheets to the roll-up worksheet.

Each sheet displays a division- or brigade-size unit without artillery assets. The artillery assets are grouped in their respective regiment and division artillery groups (RAGs and DAGs) with any attached artillery units (if known). We made the worksheets for each regiment- and brigade-size unit. We used PowerPoint graphics to brief the commander and on the homepage. Microsoft Office 97 permits us to revise the Excel linked to the graphics software that automatically updates the graphics as the spreadsheets are revised.

**Reporting Procedures**. The BDA cell and the maneuver unit S2s must coordinate an action plan BDA data reporting. In our case, it was decided that every 90 minutes the BDA cell would contact (via the Mobile Subscriber Equipment) each brigade for its BDA results. This allowed the BDA cell to consolidate all data, remove the redundancy in the reporting, and establish the accuracy of the results. The BDA cell then updated their database, and was able to meet the requirement to post the BDA results on the division homepage every three hours. It was also agreed that the division artillery (DIVARTY) S2 would be responsible for collecting all artillery BDA from the brigades and the Corps (see the article by Captain Harris beginning on page 42). He became the central point for all artillery reports, which helped in removing redundant data and reporting an accurate BDA count to the Division's BDA cell.

## Problems

When units in contact were not able to give an actual count of equipment destroyed or damaged, they would report that they had just destroyed a regiment or battalion. This could cause some conflict in accurate reporting if not for the flexibility of assessing a unit which is done by the BDA

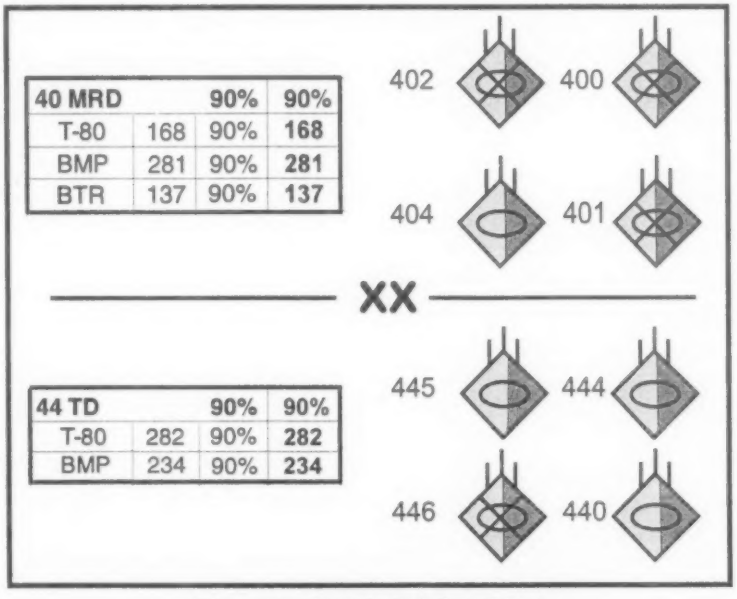
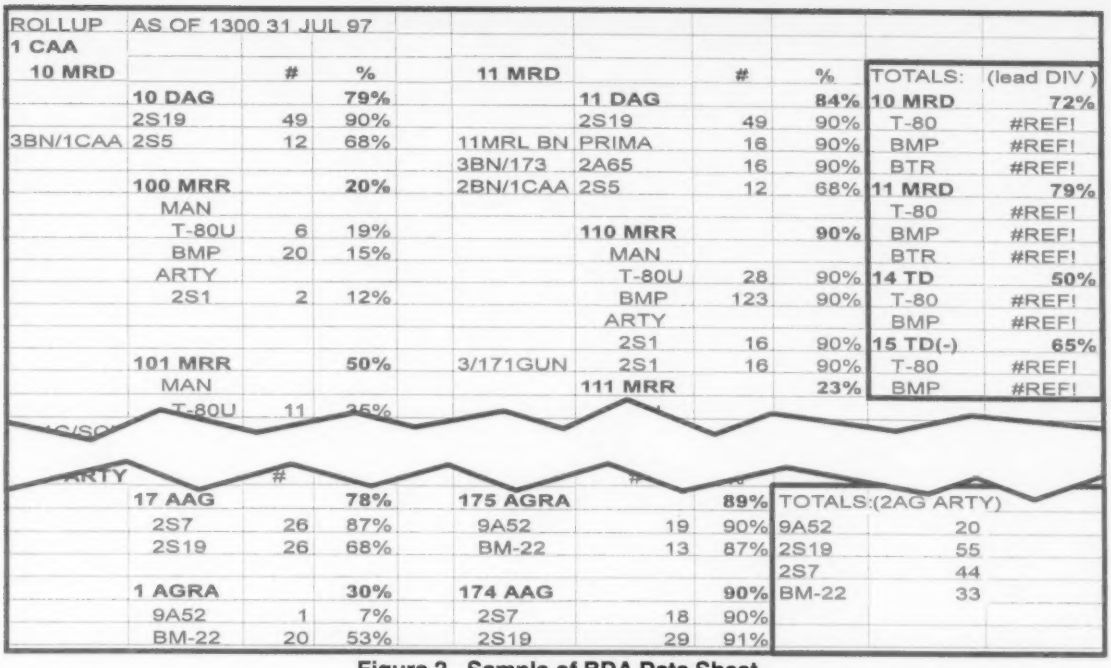



**Figure 1. Sample Briefing Chart.**



| ROLLUP | AS OF 1300 31 JUL 97 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 CAA | | | | | | | | | |
| 10 MRD | | # | % | 11 MRD | | # | % | TOTALS: | (lead DIV ) |
| | 10 DAG | | 79% | | 11 DAG | | 84% | 10 MRD | 72% |
| | 2S19 | 49 | 90% | | 2S19 | 49 | 90% | T-80 | #REF! |
| 3BN/1CAA | 2S5 | 12 | 68% | 11MRL BN | PRIMA | 16 | 90% | BMP | #REF! |
| | | | | 3BN/173 | 2A65 | 16 | 90% | BTR | #REF! |
| | 100 MRR | | 20% | 2BN/1CAA | 2S5 | 12 | 68% | 11 MRD | 79% |
| | MAN | | | | | | | T-80 | #REF! |
| | T-80U | 6 | 19% | | 110 MRR | | 90% | BMP | #REF! |
| | BMP | 20 | 15% | | MAN | | | BTR | #REF! |
| | ARTY | | | | T-80U | 28 | 90% | 14 TD | 50% |
| | 2S1 | 2 | 12% | | BMP | 123 | 90% | T-80 | #REF! |
| | | | | | ARTY | | | BMP | #REF! |
| | | | | | 2S1 | 16 | 90% | 15 TD(-) | 65% |
| | 101 MRR | | 50% | 3/171GUN | 2S1 | 16 | 90% | T-80 | #REF! |
| | MAN | | | | 111 MRR | | 23% | BMP | #REF! |
| | T-80U | 11 | 35% | | | | | | |
| ARTY | | # | | | | | | | |
| | 17 AAG | | 78% | 175 AGRA | | | 89% | TOTALS:(2AG ARTY) | |
| | 2S7 | 26 | 87% | 9A52 | 19 | 90% | | 9A52 | 20 |
| | 2S19 | 26 | 68% | BM-22 | 13 | 87% | | 2S19 | 55 |
| | | | | | | | | 2S7 | 44 |
| | 1 AGRA | | 30% | 174 AAG | | 90% | | BM-22 | 33 |
| | 9A52 | 1 | 7% | 2S7 | 18 | 90% | | | |
| | BM-22 | 20 | 53% | 2S19 | 29 | 91% | | | |

**Figure 2. Sample of BDA Data Sheet.**

cell. The PowerPoint slides showed the actual numbers received in red, and beside the red was the color yellow which reflected the assessment of the division. This number or percentage was lower than the actual numbers and gave the CG a realistic view of the true combat strength of the opposing forces units. We refer to this as predictive BDA. No adjustment was made to the excel spreadsheets until the actual numbers were consolidated and reported to the BDA cell.

## Conclusion

The BDA process was highly successful during DAWE even though it was analog rather than digital. The evolution of effective TTP's and dedication of an ad hoc BDA cell took the process to a new level of accuracy and timelines. Automating and digitizing BDA via ASAS-RWS will potentially increase efficiency to even new heights and decrease the manpower intensiveness of the process.

**Endnotes**

1. Much of our TTP was based on the Proposed Doctrine and Tactics, Techniques, and Procedures for Battle Damage Assessment (DRAFT), dated 26 May 1993, by the United States Army Intelligence Center and Fort Huachuca (USAIC&FH). This document provides additional information useful for understanding and applying the principles and methods of BDA. It is available through Mr. Griffin via E-mail griffinw@huachuca-emh1.army.mil or telephonically at (520) 538-1010 and DSN 879-1010.

2. Microsoft® Office 97® and MS PowerPoint™ are trademarks of the Microsoft Corporation. Several companies have trademarks on portions of Excel.

3. Due to the advanced visual technologies available in the 4ID's main command post (D-MAIN), our commanding general has been very specific about how BDA information should be graphically presented.

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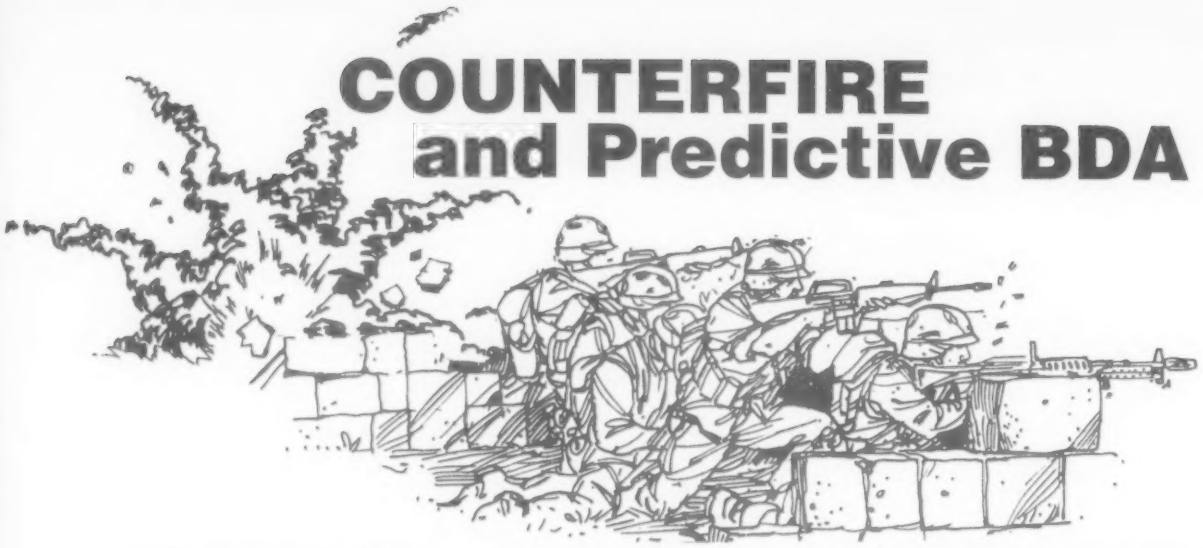
*CW2 Hopkins is currently assigned to the 500th MI Brigade in Japan. He was assigned to the 4ID(M) ACE's Technical Control and Processing Section. He has a bachelor of science degree in Business Administration from the New York State Regents University.*

*CW2 Fujiwara Fujiwara is the Electronic Intelligence (ELINT) Officer in Charge in the ACE Detachment, 104th MI Battalion. His previous assignments include LElectronic Processing and Dissemination System (EPDS) Systems OIC at the 532d MI Battalion; ELINT Technician, All-Source Production Section, 2ID; and ELINT Technician, 501st MI Battalion, !AD. Readers can reach him via E-mail at fujiwaram@hood-emh3.army.mil and telephonically at (254) 618-7534 or DSN 259-7534.*

### Homepage Addresses

Please send us your Internet Unit Homepage address. MIPB will publish a list of MI unit homepages as a centerfold in a future issue. With the subject line "Unit Homepage," E-mail the unit homepage address to: mipb@huachuca-emh1.army.mil.

# COUNTERFIRE and Predictive BDA



**by Captain H. Brock Harris**

The Artillery S2 performs two primary battle-staff functions: painting the reactive counterfire picture and providing predictive battle damage assessment (BDA) for unobserved fires. Creating these two products is both labor- and time-intensive due to the analog methods used to build the counterfire overlay and compute predictive BDA. Although the predictive BDA was 98-percent accurate when compared with the actual BDA results during the Division XXI Advanced Warfighting Experiment (DAWE), the analog methods used to arrive at the end-state often relegated the enemy artillery BDA report to one that was historical in nature.

## Background

Reporting BDA results is important because it supports the commander's decisionmaking process. Too often, however, BDA reporting is more statistical than analytical—more historical than predictive. When the decision to attack a particular enemy unit is tied to reducing it to a predetermined strength prior to our crossing the line of departure, the BDA estimates must be timely and accurate. One of the essential lessons we learned during the DAWE is that the analog BDA reporting cycle used previously (every six hours) does not support timely decisionmaking. Due to the enhanced capabilities of the digitized division and the killing capability of new artillery munitions, the ability to produce the counterfire overlay and provide predictive BDA for unobserved fires must occur in near-real time.

Others have previously written articles clearly detailing the "how to" of both counterfire and predictive BDA. The January-February 1998 issue of Field Artillery contains an excellent article entitled "The Artillery S2 and Interpretive Counterfire BDA" by Major John E. Della-Giustina. The January-February 1997 issue of Field Artillery carried two similar articles by Captain Daniel Burgess. Each of these authors lays down the basics of computing BDA based on accurate templating, counterfire assessment, and data contained in **The Joint Munitions Effectiveness Manual** (JMEMS), a classified document. The purpose of this article is to demonstrate the need for a more effective and efficient way of doing business and to propose solutions for automating the counterfire and predictive BDA processes to support future field artillery systems.

## Enhanced Friendly Capabilities

The ability to acquire targets at much greater distances than before, coupled with the ability to engage those targets with lethal fires, is a major reason that the counterfire and predictive BDA processes must be automated. In addition to the many Force XXI intelligence assets that will be fielded, the AN/TPQ-37 Firefinder target acquisition radar will have increased range and accuracy. The Firefinder (BLOCK II) will be able to acquire conventional artillery targets out to 60 kilometers and tactical ballistic missiles to 250 to 300 km deep. Force XXI collection assets improve our ability to execute the proactive counterfire fight, and the improved Firefinder enhances our ability to execute the reactive counterfire fight.

Acquiring targets deeper and earlier is only part of the story. It does little good to acquire a target at 200 km if there is no organic capability to destroy the target. New munitions mean that we will no longer have to wait for the enemy to enter the brigade or division "close fight" to destroy him. The Crusader's 45-km range for dual-purpose improved conventional munitions (DPICM) will provide the United States—for the first time—with a standoff advantage against all Russian cannon artillery except the 2S7 self-propelled howitzer. The 60-km operational range of the Extended Range-Guided (ER-G) Multiple Launch Rocket System (MLRS) will provide a stand-off advantage against all Russian MLRS systems except the 9A52 SMERSCH, a 300-mm MLRS system that shoots 70 km.

Finally, the Army Tactical Missile System (ATACMS) BLOCK IA (1998) will provide a range of 70 to 300 km, with each rocket containing 300 submunitions. The ATACMS BLOCKs II (2001) and IIA (2003) will provide ranges of 35 to 140 km and 100 to 300 km, respectively. The ATACMS BLOCK II and IIA munitions will be equipped with Global Positioning System (GPS)-aided inertial guidance systems; they are designed to inflict grave damage on armored combat vehicles. The ATACMS BLOCK II will have thirteen BAT (brilliant munition) submunitions, and is designed to engage moving armored combat vehicles only. The ATACMS BLOCK IIA will be equipped with six improved BAT submunitions (preplanned product improvement ). It is designed for use against hot or cold, moving or stationary, armored combat vehicle targets.[1] The BAT is a:

*dual-sensor (acoustic and infrared) submunition sometimes referred to as "brilliant" because, once dispensed, it autonomously seeks targets with freedom-of-flight direction, enabling BAT to locate targets within a large radius of the dispense point. Its primary target set will be moving armored formations.*[2]

## Impacts

The increased killing capabilities of new munitions means that the artillery S2 will have a more complicated job in predicting battle damage. Old munitions effects tables used during previous exercises are no longer valid. Further, emerging 21st Century adversary artillery doctrine has already rendered current threat artillery templates obsolete. To aid the Artillery S2, new munitions effects tables that significantly alter how predictive BDA is determined are available from the Field Artillery Battle Lab at Fort Sill, Oklahoma, and doctrinal updates are available from the Battle Command Training Program (BCTP) committee at Fort Leavenworth.

## Outlining Needed Reforms

Painting the counterfire picture and determining predictive BDA is a team effort. During conflict, two field artillery (FA) brigades will reinforce a heavy division. In the DAWE, the 214th FA Brigade from Fort Sill, and the 138th FA Brigade from the Kentucky National Guard supported 4ID(M). Automating the counterfire and BDA assumes that each reinforcing FA brigade is equipped in the same manner as the supported division. During the DAWE, we had trouble due to different Advanced Field Artillery Tactical Data System (AFATDS) versions and a lack of All-Source Analysis System (ASAS) and Maneuver Control System (MCS) capabilities in the FA brigades. If the respective S2 sections are not equipped with identical versions of ASAS, the following proposal will not work.

Figure 1 shows the "workarounds" developed to combat technology problems and demonstrates the complexity of creating and sharing the counterfire overlay, and then computing predic-

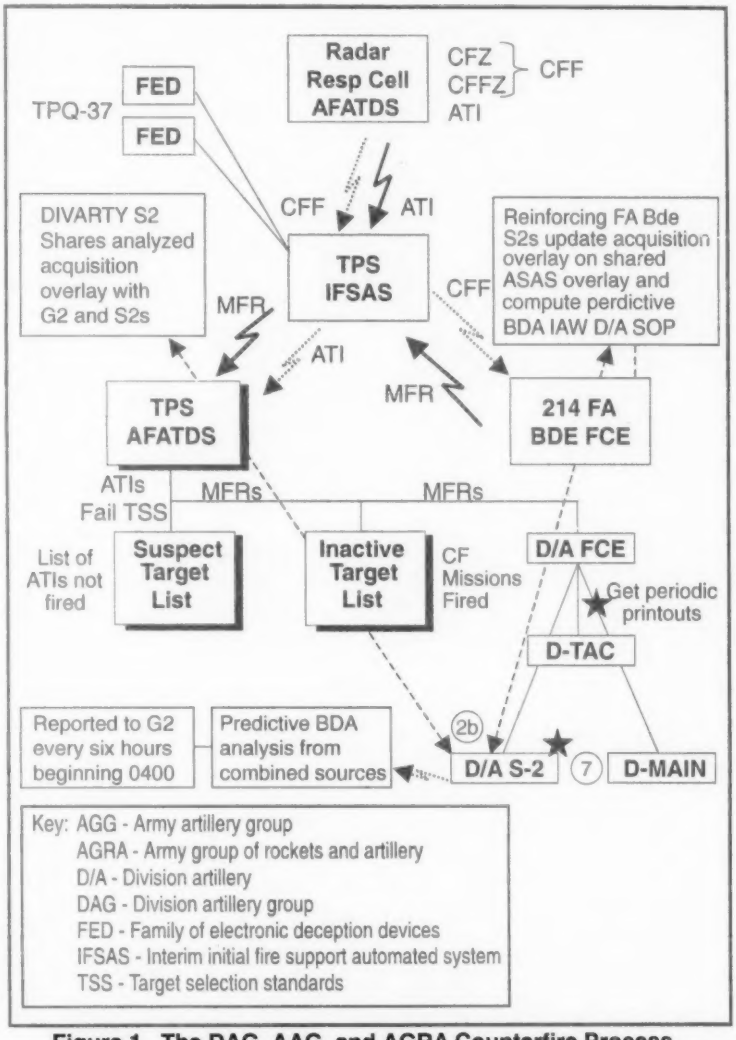



**Figure 1. The DAG, AAG, and AGRA Counterfire Process.**

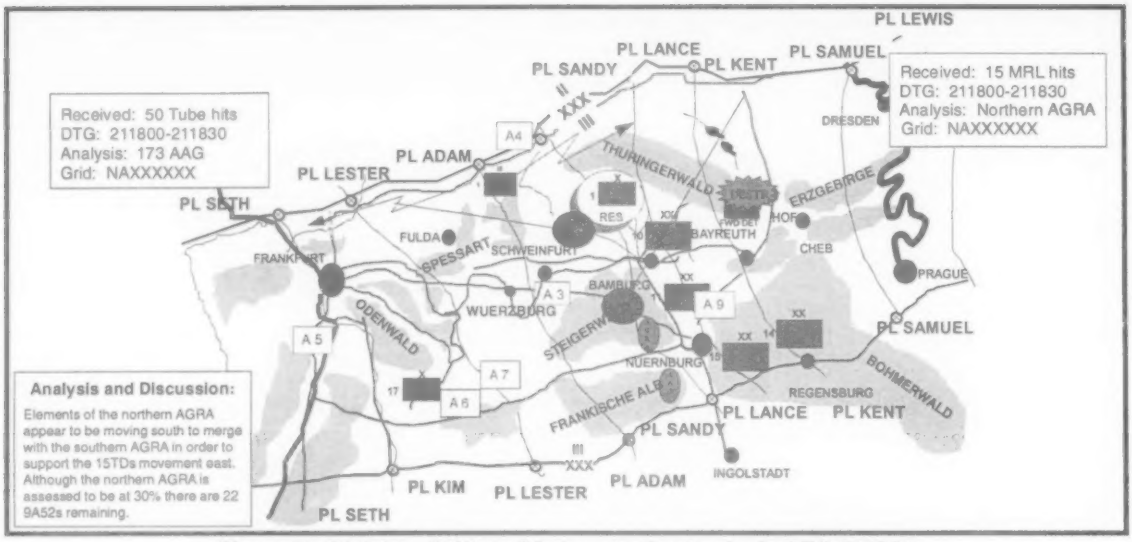



**Figure 2. Division Artillery S2 Counterfire Analysis DTG 211800.**

tive BDA. It also outlines what must happen when the counterfire headquarters is not the division artillery (DIVARTY) tactical operations center (TOC). Of note is the normal time lag from target acquisition to receipt of the mission-fired report (MFR). During one significant DAWE battle—due to the low priority the AFATDS assigned to MFRs—the MFRs from 1030 that morning were received in the S2 section via ASAS at 1600 that afternoon. This six-hour information gap magnifies the need for the respective artillery S2 sections to understand analog BDA procedures, while strengthening the argument for automating counterfire and BDA functions.

## Proposed Improvements

The counterfire overlay is a great cross-cueing tool for the Intelligence Support Element (formerly known as the division tactical command post (DTAC or TAC1) Analysis and Control Element (ACE) Forward. However, this overlay is difficult to create and update. Currently, the ASAS operator at the artillery counterfire headquarters must physically type each Firefinder acquisition into the ASAS to create the overlay (see Figure 2). This overlay is color-coded by time and confirms or denies the enemy artillery template. During a significant counterfire fight (many acquisitions in a short period of time), the operator is challenged to keep the overlay current, and the ASAS is tied up with manual tasks that detract from its analytical purpose.

We must rewrite the software of both AFATDS and ASAS so that Firefinder acquisitions parse automatically into the ASAS database. Ideally, an acquisition will immediately appear on-screen in the appropriate color as established in the operator set-up parameters. The ASAS operator can then click on the icon and learn the following information:

- ☐ Time of acquisition.
- ☐ Artillery caliber and type (rocket or artillery; heavy, medium, or light mortar).
- ☐ Target acquisition grid.
- ☐ "Impact predict grid."

In the ACE, these acquisitions can be matched against known and identified unit locations through other intelligence products.

In addition to automating the counterfire process, further software adjustments are required to match targets acquired with missions fired. Currently, ASAS receives Mission Fired Reports (MFRs) from AFATDS, but the information does not parse into the ASAS database; therefore, there is no way to digitally match missions fired against known enemy locations. First, we must develop

## Glossary

AN/TPQ-36 Firefinder radar (DS asset)
AN/TPQ-37 Firefinder radar (GS asset)
ATI artillery targetable intelligence
BAT brillant munitions
CFF call for fire
CFZ critically friendly zone
CFFZ call for fire zone
DDO dynamically distributed overlay
ER-G extended range-guided
FCE fire control element
LD line of departure
MSTAR MLRS Smart tactical rocket
MFR mission-fired report
P3I pre-planned product improvement
TBM tactical ballistic missle
TPS target production section

MFRs that contain target locations, munitions fired, number of rounds fired, and the time on target (time the target was acquired). The information must then parse into the ASAS database. Finally, we must establish munitions effects tables in ASAS. Then it will be possible to digitally correlate the targets acquired with the missions fired, and to assess BDA all in near-real time. Assessing BDA against targets fired without the aid of radar acquisition can be accomplished using a manual BDA tool that allows the ASAS operator to exercise both analytical and computer skills to compute BDA results against non-artillery targets.

Automating the counterfire and BDA processes requires additional ASAS support for the Artillery S2. The Input Box would have all of the following functions: receive all reports and products; create the target acquisition overlay; compute BDA; and build automated BDA products. The Output Box would function as the TOC server, and display the current distributed digital overlay (DDO) from the division and the shared database for all DIVARTY products.

Although some would argue that counterfire and BDA analysis are already automated, we have miles to go before either is truly digitized. Future analytical resources must evolve in direct proportion with killing systems.

**Endnotes**

1. Based on numerous unclassified briefings from the Task Force XXI AWE and from the 4ID(M) Fire Support "Smartbook."

2. John K. Yager and Jeffrey L. Froysland, "Improving the Effects of Fires with Precision Munitions," Field Artillery, March-April 1997, pages 5 through 7.

*Captain Brock Harris is currently the 4ID(M) DIVARTY S2. He has experience as a Direct Support MI Company Commander, MI Battalion S3 and S4, and as an intelligence electronic warfare liaison officer. He holds a Bachelor of Business Administration degree in Finance from Middle Tennessee State University. Readers can reach him at (254) 288-3180 or DSN 738-3180. E-mail is harrisb@hood-emh3.army.mil.*

# MI Corps Hall of Fame Nominations

The U.S. Army Intelligence Center and Fort Huachuca accepts nominations throughout the year for the MI Hall of Fame. Anyone can nominate an individual for induction into the MI Hall of Fame. Commissioned officers, warrant officers, enlisted soldiers, or civilians who have served in a U.S. Army intelligence unit or in an intelligence position in the U.S. Army are eligible for nomination.

A nominee must have made a significant contribution to MI that reflects favorably on the MI Corps. In certain isolated instances (particularly in the case of junior soldiers), heroic actions rather than other documented contributions may form the basis of the nomination.

Nominees cannot be employees of the United States Government in any capacity at the time of their nominations. Individuals cannot be self-nominated. An annual HOF Board convenes to review nominations and make recommendations to the Chief of MI who is the final approving authority for inductions into the Hall of Fame.

The Hall of Fame Coordinator provides information on nomination procedures. If you wish to nominate someone, contact HQ Garrison, U.S. Army Intelligence Center and Fort Huachuca, ATTN: ATZS-CDR (Mr. Chambers), Fort Huachuca, AZ 85613-6000. If you have specific questions, call (520) 533-1178 or DSN 821-1178/5528, or send an E-mail message to chambersj@huachuca-emh1.army. mil.

# New MI NG Unit in Georgia

The 221st Military Intelligence Battalion (Tactical Exploitation), Georgia Army National Guard is seeking personnel. The Battalion, located at Fort Gillem, Georgia, is seeking commissioned officers, warrant officers, and enlisted personnel, especially in military occupational specialties 97B (Counterintelligence Agent) and 97E (Interrogator). The desired languages are Korean and Arabic.

The Battalion's mission is tactical exploitation. They will conduct interrogation of enemy prisoners of war, counterintelligence, force protection collection operations, and long-range reconnaissance and surveillance. They may serve in any theater in support of corps and subordinate divisions, armored cavalry regiments, and separate brigades.

Interested prior service personnel should provide their 2-1s (enlisted) or Officer Record Briefs (DA Form 4037) and a biographical summary or resume. Those currently on active duty should also furnish their current physicals, latest APFT (Army physical fitness test) scores, and most recent weigh-in results. If you need more information, please contact the recruiting office at (404) 624-6600 or from inside Georgia, 1-800-282-4222, or write Commander, 221st MI Battalion, North First Street, Building 211A, Fort Gillem, GA 30297.

The points of contact at the 221st MI Battalion (TEB) are Second Lieutenant Rosa Kelly and Major Richard Iler (Commander). You can reach them via E-mail 221mi@ga-arng.ngb.army.mil, by telephone (404) 362-2543/4, or through facsimile (404) 362-2792.

# Operation Little Flower: The United Nations' Apprehension of an Indicted War Criminal

**The views expressed in this article are those of the authors and do not reflect the official policy or position of the United Nations, the International Criminal Tribunal for the Former Yugoslavia (ICTY), or the U.S. Government.**

## FOREWORD

**by Ambassador Jacques Paul Klein**

One of the most personally rewarding accomplishments of my tour as the United Nations Transitional Administrator for Eastern Slavonia (UNTAES), Baranja, and Western Sirmium was the planning and accomplishment of the first apprehension of an indicted war criminal in the UNTAES. Having exhumed (in conjunction with ICTY) the war crimes site at Ovcara where 260 wounded military and civilian personnel from the Vukovar Hospital were murdered and buried, it was gratifying to apprehend at least one of the principal perpetrators indicted for this crime against humanity and transport him to The Hague.

Our principal concern in planning the operation was for the safety and welfare of the 700 U.N. personnel residing on the economy or living in Serb homes. We had to factor in this security issue throughout the planning phase. However, my faith in my planning cell and soldiers was confirmed. The superb operational planning capabilities of my staff, the repeated rehearsals, and the flawless execution of the operation by UNTAES military personnel demonstrated such a remarkably high level of professionalism that it ensured success and minimized any possible threats of violence.

The operation went far to dispel the notion that war criminals could not be apprehended and that the International Community did not have the resolve to do so. We succeeded and other arrests have followed. Our failure to act would have been unconscionable and would have put into doubt the very reason for our presence in the former Republic of Yugoslavia. This was the most difficult war of all: a war between neighbors and friends, a war between people who had lived together in a functioning community. We know that the physical wounds of war often heal faster than the psychological ones. Bringing to justice those who perpetrated such heinous crimes will go far to heal the psychological wounds as well.

*Ambassador Jacques Paul Klein is a career diplomat and U.S. Air Force Reserve Major General. He was the United Nations Transitional Administrator, Eastern Slavonia, until August 1997. He currently serves as the Deputy High Representative for the Office of the High Representative (OHR) in Bosnia-Herzegovina.*

**by Major David Sterling Jones, USA, and Captain Paul J. McDowell, USAF**

*I welcome the news that Slavko Dokmanovic, an indicted war criminal, has been apprehended by investigators for the International Criminal Tribunal for the Former Yugoslavia (ICTY), working with the U.N. Transitional Administration in Eastern Slavonia (UNTAES). I congratulate the ICTY and UNTAES on their successful apprehension. The United States continues to support fully the work of the Tribunal to bring indicted war criminals to justice.*

**—Statement by President Bill Clinton, The White House, 27 June 1997**

On 27 June 1997, UNTAES troops and members of the ICTY[1] apprehended Slavko Dokmanovic, a Croatian Serb and former mayor of Vukovar, Croatia, who was charged in a sealed indictment with war crimes. This was the first time a mission of this type used armed troops to apprehend an individual under indictment by the War Crimes Tribunal. As demonstrated 13 days later in Prijedor, Bosnia-Herzegovina, when British Stabilization Force (SFOR) troops moved against local indicted war criminals, the United Nations and the SFOR signaled a new determination to bring suspected war criminals to justice. After 18 months of inaction, the sudden change in course would have far-reaching and potentially hazardous implications on U.N. and SFOR operations in the former Republic of Yugoslavia. This article will discuss the background, planning, and execution of the first successful arrest operation mounted in the former Yugoslavia: Operation LITTLE FLOWER.

## Setting the Scene

The origins of Operation LITTLE FLOWER can be traced to the opening days of the conflict in Fall 1991. As Croatia slid into the abyss of civil war, Europe was faced with the inhumanities of mass murder, rape, and wholesale destruction not seen since the Second World War. The outbreak of war was to be followed by years of failed attempts at bringing peace to the war-torn region. In the closing months of 1995, the United Nations, in conjunction with the North Atlantic Treaty Organization, would take a more resolute stand in the pursuit of peace. The first step was the signing of the Dayton Accords in Dayton, Ohio, leading to the December creation of the Implementation Force (IFOR). This was followed at Erdut, Croatia, with the signing of the Erdut agreement, which led to the creation of the UNTAES. In January 1996, the United Nations Transitional Administration for Eastern Slavonia (UNTAES) was established as a final act in the peaceful restoration of Croatian sovereignty over territory lost in Fall 1991. Three years earlier, the United Nations had established the International Criminal Tribunal for the Former Yugoslavia (ICTY) located in The Hague, Netherlands, in response to the horrific war crimes which were surfacing out of the bloodbath of the former Yugoslavia. UNTAES and ICTY would be brought together in the opening days of 1997 by a mass grave outside of Vukovar, Croatia. The grave contained the bodies of 260 murdered prisoners of war, and the organizations shared a common belief that such horrors should be punished.

## The Battle for Vukovar

The location of this event greatly belies its peaceful setting. It is region of Croatia lying on the banks of the Danube (Dunav) River—that marks the border between the Federal Republic of Yugoslavia (FRY) and the Republic of Croatia, Eastern Slavonia—that is rich in both agriculture and oil. The region has a long history of mixed ethnic communities made up of Croats, Serbs, Hungarians, and others. This area, historically known for its fertile farmlands, abundant wildlife and vineyards, became known for something far more sinister. It would soon become the focal point of some of the most brutal fighting in the breakup of Yugoslavia.

The Republic of Croatia declared its independence on 25 June 1991 after conducting a referendum on 19 May regarding Croatia's future in the Yugoslav Federation. Pressure from the European Community persuaded Croatia to delay the effective date of its independence until 8 October 1991.

Shortly after the June declaration of independence, Serbs living within the borders of Croatia intensified their armed insurrection against the Croatian government in an effort to carve out the his-

Photo courtesy of Major Jones

**Destroyed St. Philip and Jacob Church in Vukovar.**

torically Serb regions. In the middle of this struggle stood the Yugoslav Peoples Army (JNA), led primarily by a Serb-dominated officer corps. From the start of hostilities, the JNA would intervene in support of the Croatian Serb cause.

In what became an 86-day battle for Eastern Slavonia, by late August, the JNA and Serb paramilitary forces overran much of Eastern Slavonia where they occupied and laid waste to most non-Serb villages in the region. They then laid siege to the city of Vukovar, one of the first of many cities in the former Yugoslavia to suffer under a sustained artillery assault. The onslaught killed hundreds of civilians and soldiers and destroyed most of the city. From August through November, a Croatian garrison of never more than 2,500 National Guardsmen stood against a combined JNA and Serb paramilitary force of more than 30,000 troops with tanks, artillery, and aircraft. Finally, on 18 November 1991, the combined Serb forces overran the few remaining pockets of Croat defenders and occupied the remains of the city.

## The Battle's Aftermath

The tragedy of Vukovar did not end with the fall of the city. During the last few days of the siege, several hundred people took refuge in the city hospital in Vukovar in the hope that it would be evacuated in the presence of international observers. An evacuation had been agreed upon during negotiations between the JNA and the Croatian government on 18 November in Zagreb.

The day after the surrender, JNA troops took control of the Vukovar hospital and the hundreds of sick and wounded civilians, soldiers, hospital staff, and family members there. Also counted among the numbers were Croatian soldiers seeking refuge among the wounded or acting as hospital staff members. Throughout the day, Serb paramilitary soldiers removed more than 400 men from the hospital. The JNA loaded about 300 of these men on buses and trucks and move them to a federal Army barracks on the south side of the city.

During the two hours that the buses were at the barracks, about 15 men were ordered released by JNA officers because they were hospital staff mistakenly picked up. The remaining men were then driven to Ovcara Farm approximately four kilometers south of Vukovar. The beatings began from the moment that they stepped off the buses at Ovcara and continued for several hours, resulting in the deaths of at least two men. At one point, the JNA troops intervened and secured the release of seven men who were taken back to Vukovar.

On the evening of 20 November, the remaining men were removed from the building at Ovcara Farm. According to ICTY documents, soldiers divided the men into groups of ten to twenty. The trucks headed down a small dirt road a short distance from the building, between a cultivated field and a wooded area. When the trucks reached a prepared site, soldiers removed the prisoners, lined them up, and shot them. After killing approximately 260 men in the course of the evening, soldiers used a bulldozer to bury their victims in a mass grave.

Of the 300 men removed from the Vukovar Hospital, 260 remained missing. For their role in the fall of Vukovar and the massacre at Ovcara Farm, three JNA officers were later indicted by the ICTY. On 26 March 1996, for his role in the massacre, the Mayor of Vukovar, Slavko Dokmanovic was added under a sealed indictment.

## The First Attempt

*Article 21. UNTAES shall cooperate with the International Tribunal in the performance of its mandate, including with regard to the protection of sites identified by the Prosecutor and persons conducting investigations for the International Tribunal.*

**—U.N. Resolution 1037, 15 January 1996**

In early January 1997, ICTY Team 4 investigators traveled to the UNTAES Headquarters in Vukovar to discuss developing a plan for the arrest of Slavko Dokmanovic. The Transitional Administrator, Jacques Paul Klein, authorized the UNTAES staff to conduct planning with the ICTY to enable the mission to respond to any future requests for assistance

Photo courtesy of Major Jones

**UNTAES and ICTY personnel supervise excavation of a mass grave.**

should an indicted war criminal be identified in the region.

As the end of January 1997 neared, ICTY identified an opportunity to make an arrest. Planning was still in its early stages at this point, and the Force Commander of UNTAES, Major General Willy Hanset of Belgium, was far from comfortable with the serious lack of critical information about the suspect. A number of questions remained unanswered. Those involved in planning this operation had little knowledge of the individual's willingness or training to resist, what type of personal protection force he had, or even what support he still had inside the UNTAES region. There was, however, a greater difficulty facing mission planners: how to bring together a force made up of multiple elements without compromising the mission. The force included contingents from Belgium, Ukraine, Poland, Pakistan, Russia, as well as elements of the Transitional Police Force (TPF), the United Nations Civilian Police (UNCIVPOL), and other UNTAES elements.

At the same time, UNTAES had to ensure that all participants, no matter how small their roles, were aware of how the mission may affect their troops. As the planned date for the detention and arrest of the suspect neared, it became clear that the current force structure was too unwieldy to be effective and to maintain the necessary degree of operational security. To maintain operational effectiveness and minimize the chances of mission compromise, the mission planners would need to pare down to a minimum the number of languages and organizations in the UNTAES arrest force. In addition to these problems, it was clear that there was no chance to conduct a rehearsal of the operation with all of the participating troops. If the mission proceeded, it would be "on the fly."

With some degree of relief, mission planners received word from ICTY investigators a mere 24 hours before execution of the operation that the mission was canceled because the suspect was not going to show as planned. The pressure was off. With many individuals believing that the suspect was aware that he was under indictment and wanted by The Hague, most of the UNTAES planners felt that such matters were best left to others outside of UNTAES. Believing that the matter was over, those involved in the operation shelved the plan and hoped for another chance under better conditions.

## Build A Better Trap

Having identified a number of serious flaws in the planning capabilities for an arrest mission, the Transitional Administrator directed a small group of UNTAES planners to prepare a force package from the available troops in the mission. In the future, the force package could be quickly activated to execute the detention and arrest of war crimes suspects. With clear guidance from the Transitional Administrator, serious planning commenced two months later, making use of only one contingent from UNTAES. By May, the ICTY felt that another opportunity was nearing. Accordingly, an UNTAES representative flew to The Hague in The Netherlands to lay out the parameters for any future arrest attempts to be conducted in the UNTAES region. After a day of discussions about operational possibilities, the new planning group decided on a basic concept for the operation and set a target date. Within two weeks of the meeting in The Hague, the group laid a base operation plan on the desk of the contingent commander whose troops would play the greatest role in the execution of the mission. The next four weeks gave the commander time to refine the plan and prepare his troops.

## A New Window of Opportunity

As the target date approached, preparations intensified. The planners and forces involved felt that this time the mission was well prepared and would be successful. At this point, all the planners and operators needed was for Slavko Dokmanovic to be as predictable as ICTY had claimed he would be. On 23 June, the final rehearsals were conducted with all UNTAES and ICTY participants taking part. The rehearsals covered the actual area in which the operation would be executed although they had to remain out of the sight of the local populace. The plan received final approval from the Transitional Administrator who, at the time, was at U.N. Headquarters in New York, where he had successfully cleared the mission with U.N. Secretary Gen-

eral Kofi Annan and the U.N. legal authorities.

The planning group then arranged to transport the suspect, once arrested, from Croatia to The Hague. To accomplish this, the UNTAES Air Cell positioned a six-passenger executive class aircraft at Cepin Airfield just outside the UNTAES region. If all worked as planned, the aircraft would transport both the ICTY team and the suspect out of the region within minutes of the takedown.

As often happens with the best laid plans, the target did not cooperate. For three days, the surveillance teams dug in at border crossings while the detention and arrest team waited anxiously for the suspect to enter the region. By 25 June, it was clear that Dokmanovic would require an additional incentive to enter the UNTAES region.

Late on the 25th, the ICTY and UNTAES developed an alternate course of action which would ensure that Dokmanovic would feel comfortable crossing over from the Federal Republic of Yugoslavia (FRY) into the UNTAES administered region of Croatia. Dokmanovic still owned a house in the region and the issue of compensation for the property greatly concerned him. Dokmanovic had also expressed a worry that Croatian authorities were eager to apprehend him. It became clear to the LITTLE FLOWER planning team that if Dokmanovic was going to travel in the UNTAES region and conduct any type of business, it must occur before 15 July when Croatian authorities would begin reasserting authority over the region.

Investigators from the ICTY had gained Dokmanovic's confidence by conducting interviews at his home in Sombor, FRY, over the previous days under the guise of investigating Croatian war crimes of which Dokmanovic had knowledge. The interviews served to build confidence between Dokmanovic and the agents and reinforce the idea that he was not wanted by the ICTY and that he had nothing to fear from ICTY or UNTAES.

Knowing that Dokmanovic was eager to make contact with UNTAES representatives about property issues and having his full confidence that neither UNTAES nor ICTY wanted him, investigators offered to arrange a meeting between Dokmanovic and UNTAES. The UNTAES quickly approved the change in plan and laid the groundwork for Dokmanovic to enter the UNTAES region under the guise of meeting with UNTAES officials. The final act of gaining his full cooperation was providing a U.N. vehicle at the border to transport him to the meeting.

Photo courtesy of UNTAES

**Slavko Domanovic is taken into custody by UNTAES troops on 27 June 1997.**

## The Arrest

In preparation for the suspect's arrest, the LITTLE FLOWER planners established a protocol to guarantee a smooth, speedy, and safe transfer of the suspect from UNTAES authorities to ICTY officers and then on to The Hague. ICTY would provide a voice recording of the reading of the suspect's rights and charges, and would maintain a recording capability until the suspect was handed over to Dutch authorities in The Hague. It was also important that video and still shots be made for documentation purposes; UNTAES would provide that capability. Before the suspect would be able to leave the UNTAES area of operations (AO) and control, the planners agreed that Dokmanovic should be given a medical examination. This would serve two purposes. First, it would insure the suspect had not been harmed during the detention and arrest. More importantly, it would verify he was capable of making the trip to The Hague without having medical problems enroute. The last detail to be ironed out was that of coordinating the press releases and other administrative matters between UNTAES and ICTY. These measures proved invaluable during the hectic hours following the arrest.

At 1455 hrs on 27 June 1997, Slavko Dokmanovic entered Eastern Slavonia in a U.N. vehicle driven by specially trained UNTAES soldiers. A short distance after crossing the Dunav River, as planned, the vehicle abruptly departed from the road into a secure area; then the UNTAES force seized Dokmanovic. The speed and violence of the maneuver prevented Dokmanovic from removing a loaded .357 Magnum pistol from his brief case. The UNTAES soldiers detained Dokmanovic as a wanted war criminal under indictment by the International War Crimes Tribunal. Within minutes of this detention, ICTY agents stepped from the shadows and placed Dokmanovic under arrest. Translators read him both his rights and the charges against him. Within twenty minutes of his entry into the UNTAES AO, Dokmanovic was again

moving, but this time under arrest and secured in a convoy of well-armed U.N. vehicles.

Upon his arrival at Cepin, UNTAES forces prepared Dokmanovic for the flight to The Netherlands. At this point, however, medical personnel determined that Dokmanovic's heart was exhibiting dangerous, irregular heartbeats. He was accordingly provided medication to help bring his heart rate under control. This discovery, and the resulting medical attention, cost twenty vital minutes at the airfield. It was a setback in time, but it ensured that a living, healthy suspect, not a heart attack or stroke victim, reached The Hague. Just over an hour and ten minutes after entering Eastern Slavonia, Dokmanovic was "wheels up" enroute to a Dutch military airbase in The Netherlands. The United Nations had crossed the war criminals' Rubicon.

## Post Operations

With the departure of the aircraft bearing Dokmanovic from Cepin Airfield, a prearranged three-hour blackout on news of the arrest took effect. The intent of the blackout was to enable both UNTAES and ICTY to finalize press releases, upgrade security postures within the mission AO, and get the word out to other peopled involved in the mission. The Transitional Administrator---who had been airborne in an Mi-8 helicopter in the vicinity of Cepin Airfield in the event that serious problems developed and his intervention was necessary---returned to the Vukovar headquarters after Dokmanovic's departure from Cepin. On his return to headquarters, Mr. Klein initiated a prioritized list of telephone numbers to start the notification process to senior United Nations and national government officials.

While Slavko Dokmanovic pondered his future in Scheveningen Prison in The Hague, British SFOR troops moved in to arrest two Bosnian Serb war crimes suspects also under sealed indictment in Prijedor on 10 July 1997. Milan "Mico" Kovacevic was taken without incident. Simo Drijaca was killed in an exchange of gunfire that left one British soldier wounded. Within days, tensions escalated across Bosnia as suspected war criminals and supporters prepared for possible additional arrests. For months, the speculation of further apprehensions being planned circulated in the international media prompting the SFOR---contributing nations to dispel these rumors. Meanwhile, back in Eastern Slavonia, a significant number of Serb hard-liners, who feared their names might also be on sealed indictments, quietly left the region.

## Conclusion

From a planning and operations perspective, many lessons can be learned from Operation LITTLE FLOWER. As stated earlier, many other hard-liners---with possible guilty consciences---left the area following the arrest. For purposes of peaceful integration of Eastern Slavonia, this was a positive side effect. In future operations of a similar nature where more than one suspect may be under surveillance, this result should be considered in the planning process.

Other lessons learned were equally important. These included the---

- ☐ Need to minimize the number of people involved in the planning and execution phases of the operation.
- ☐ Necessity to rehearse the operation in an environment that resembles the evnironment of the real operation.
- ☐ Requirement for clear command and control throughout the operation.
- ☐ Foresight to have qualified medical personnel on hand.
- ☐ Ability to provide rearguard security immediately after the operation and subsequently to protect against possible retribution.

Beyond serving as a template for future operations to apprehend war criminals and to serve notice to the guilty, LITTLE FLOWER did much more. Clearly, the presence of suspected war criminals living freely in the former Republic of Yugoslavia serves only to undermine the fragile peace that is currently in place. Operation LITTLE FLOWER demonstrated a dedicated willingness, despite the risks, to make an effort toward a lasting and just peace in the region.

**Endnote**

1. For further information on the UNTAES mission, see "UNTAES: A Story in the former Yugoslavia," in the January-March 1998 ***Military Intelligence Professional Bulletin***, or http://www.un.org./Depts/DPKO/c_miss/.htm on the Internet. Further information on the ICTY and Slavko Dokmanovic can be found at http://www.un.org/icty/.

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# CTC NOTES

## Train the Trainer: CMTC and United Nations Training

**by Major David Sterling Jones**

As the primary stability operations and support operations training facility for United States Army, Europe (USAREUR), the Combat Maneuver Training Center (CMTC) in Hohenfels, Germany, has led the way in the development and training of stability operations and support operations doctrine for the U.S. Army. In March 1993, CMTC conducted its first peace enforcement training for units of the 3d Infantry and 1st Armored Divisions. The Royal Netherlands Marines followed in May 1993, training in preparation for deployment to the United Nations Mission in Cambodia. It was envisioned that U.S. ground forces would deploy into the former Republic of Yugoslavia as a part of a United Nations (U.N.) Mission. The U.S. Army still had little experience in U.N. operations at the time. With our lessons learned from Somalia and Haiti yet to come, the CMTC had to look elsewhere for the knowledge of and experience in conducting military operations with the United Nations to insure that the trainers at CMTC were themselves well trained.

In response to the lack of peacekeeping operations (PKO) experience in the U.S. Army, the CMTC started sending officers and noncommissioned officers assigned as observer/controllers (O/Cs) and plans and operations personnel to U.N. training centers and schools to acquire valuable training and experience. CMTC personnel attend schools in Austria, Canada, Finland, Ireland, Poland, Sweden, and Switzerland. These schools, in turn, teach a variety of courses such as the U.N. Military Observer, U.N. Staff Officer, Peacekeeping: Train the Trainer, and U.N. logistics courses. Normally conducted over a three-week period, these courses are traditionally for individuals or units slated for deployment with the United Nations into a mission area. However, Partnership for Peace (PFP) and other programs grant CMTC trainers the opportunity to attend.


Photos courtesy of Captain Jones

**British, Irish and Maltese students load a simulated casualty on a helicopter during training at the U.N. school at the Military College, Ireland.**

In preparing to conduct mission rehearsals for deployments to the Balkans and Africa, or for individual replacement training (IRT) for troops deploying with the Stabilization Force (SFOR),[1] planners at the CMTC draw extensively from U.N. and U.S. experiences and lessons learned. The tasks taught at U.N. schools have direct relevance to the tasks and missions that a U.S. soldier may face in Bosnia-Herzegovina, Rwanda, Liberia, Macedonia, and other deployments. These tasks include, but are not limited to:

- ☐ Negotiation, mediation, and use of interpreters.
- ☐ Confiscation of arms.
- ☐ Relations with other U.N. and international organizations.
- ☐ Deployment of forces between hostile parties.
- ☐ Election monitoring.
- ☐ Operational techniques for United Nations PKO.

Rotational units at the CMTC will find these tasks and more incorporated into a rotation

scenario. Successful units have made extensive use of Center for Army Lessons Learned (CALL) products that draw from U.S. experiences in Somalia, Haiti, and Bosnia. The CMTC has seen a continued improvement in the development of standing operating procedures and tactics, techniques, and procedures (TTP) by rotational units, but much remains to be done. Units continue to approach the stability operations and support operations environment with a "high-intensity conflict (HIC)" mentality.

The CMTC has applied U.N. training and lessons learned to building rotations that present units with challenging and unique training opportunities. We have developed the "Former Republic of Danubia" scenario based on "classic" environments into which the United Nations has deployed. Units will find an ill-defined threat with widespread instability and all the battlefield clutter of refugees, media, nongovernmental organizations, private volunteer organizations, and joint and coalition forces. In addition to the use of contract "civilians on the battlefield," CMTC personnel trained at U.N. schools have replicated U.N. military observers and troops during rotations.

**A mounted patrol using Finnish SISU armored personnel carriers at the U.N. training center, Finland.**

With the growth of the U.S. military's commitment to the mission in Bosnia, the U.N. Preventive Deployment Force (UNPREDEP) in Macedonia, contingency operations in Africa, and other missions around the world, our participation in U.N. operations will become more commonplace. Due to these missions, the importance of capturing these experiences and educating the force with observations from the field will increase. The United Nations has discovered much from the school of hard knocks. It is important that the U.S. military not commit the same mistakes but rather build on fifty years of U.N. PKO experience. Although traditionally a HIC-oriented training center, the CMTC will continue to develop its expertise in stability operations, support operations, and PKO training using U.N. schools and lessons learned by U.S. soldiers in the field. For further information, see the CMTC Internet homepage at URL http://hqaecmtc1.hohenfels.army.mil. Train to Win!

**The author dismounts a patrol from a Finnish SISU XA-180 at the Finnish U.N. Training Center in Nunnisaco, Finland, in May 1995.**

**Endnote**

1. See Major Kathleen Phillips Combat Training Center Notes in the October-December 1997 issue of the ***Military Intelligence Professional Bulletin.***

*Major Jones is the S2, 1st Brigade, 3d Infantry Division. While serving as a Task Force S2 O/C at the CMTC, he attended the U.N. Military Observer and Staff Officer courses in Finland and Ireland. MAJ Jones served with the United Nations in Vukovar, Croatia, from January to July 1997. Readers can contact him via E-mail at afzp-va-i@emh5.stewart.army.mil and telephonically at (912) 767-7031 and DSN 870-7031.*

# The Doctrine Development Process

**by Major Howard G. Leibovitch**

Doctrinal field manuals (FMs) are the building blocks of our operating principles; they are designed to serve the units in the field today, while looking toward the requirements of the near future. They are the means of collectively presenting the essential, general ideas by which we organize and operate as functional branches or operational units. By themselves, they represent the collective wisdom and latest ideas from our senior leadership. As with many other written products, it is rare that any single individual produces a FM. This article presents a look at the timeline being implemented to develop doctrinal literature at Fort Huachuca. **Army Regulation 25-30**, **Army Integrated Publishing and Printing Program**, and **TRADOC Regulation 25-30**, **Preparation, Production and Processing of Army-wide Doctrinal and Training Literature (ADTL)**, are the two governing regulations for the production of Army manuals.

## Beginning the Process

In line with the current U.S. Army Intelligence Center and Fort Huachuca (USAIC&FH) reengineering, we have reorganized the process for developing and producing doctrinal literature to enable us to get products to the field faster. Figure 1 illustrates the current process. Army and TRADOC regulations require that proponent schools annually review their doctrinal literature requirements and maintain a five-year production cycle. Revisions of manuals normally occur in tandem with the revision of related capstone manuals (such as **FM 100-5**, **Operations**), they may occur due to changes in organizational structures, or because the introduction of new equipment may dictate changes in tactics, techniques, and procedures (TTP).

The key to the development process is clearly defining the requirements for the manual and presenting the writing team with the focus it requires to produce a quality product. This will take the form of a Program Directive, which is the "thesis statement" approved at the general officer level. Following the approval to proceed with development of the manual, the Doctrine Division will produce a Purpose, Scope, and Target Audience Statement and the Topic Sentence Outline. These two products are the guides for the writers to follow to ensure the manual maintains its intended focus. Parallel to this process, a pre-revision request is fielded worldwide to request input or ideas for changes needed in current publications.

## The Initial Draft

Once a dedicated writing team is identified, they will develop the initial draft (ID) of the manual assisted by subject matter experts within the Center and requested assistance from units in the field. Once the ID has been edited and formatted, it will be staffed for comment. We post ID documents on the Doctrinal Literature Homepage at http://138.27.35.36/Doctrine/dlb.htm. The staffing will be accomplished electronically over a two-month period.

## Final Draft

The Final Draft (FD) is the version that incorporates the field's comments into the ID. Normally, we would not restaff the FD with the field, unless it incorporates ideas that change the focus of the original ID. If this were the case, we would restaff it as a Revised Initial Draft. We allow one month for production of the Final Draft.

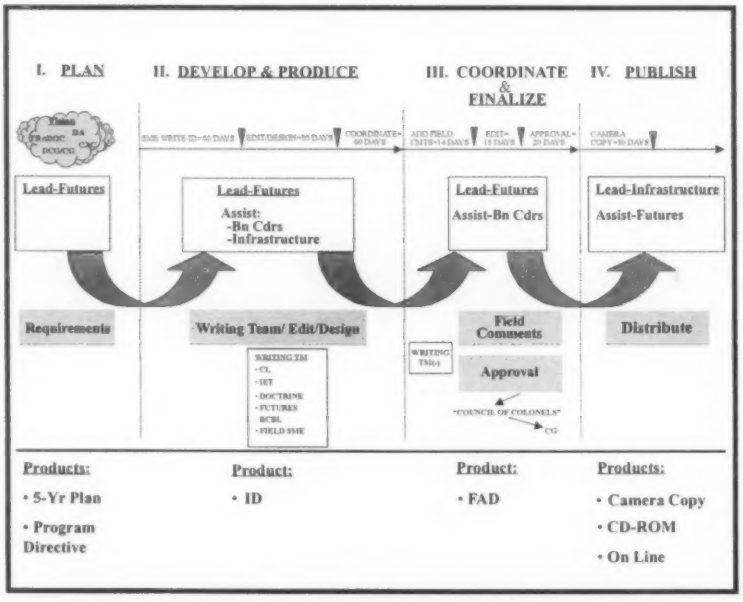


**Figure 1. Doctrine Development And Production Process.**

This includes editing and incorporating illustrations into the manual. A council of colonels revisits the FD, and it can recommend further changes before the FD version goes to the approving authority for final review.

Depending on who the approval authority is for the manual, the staffing period for approval can last between one and three months. However, once the FD is approved, we designate it the "Approved Final Draft" and prepare it for printing. Preparation of the final edited version as the camera-ready copy that goes to the Army Training Support Center (ATSC) takes two to three months. Additionally, as we discussed in the October-December 1997 issue of ***MIPB***, we prepare soft copies of the manual for posting on the Worldwide Web. As soon as it is available, we post a copy on the Doctrinal Literature Internet Homepage listed above, and eventually on the Army Doctrine and Training Digital Library (ADTDL) pages.

This new development process, projected to take nine months from the start of writing to sending the product to printer (it formerly took 18 months), will provide more timely products to the field. As always, the key to making good doctrine better, and more suited to the overall needs of the MI Corps, is your active participation in the review process. We look forward to hearing from you.

**ALWAYS OUT FRONT!**

*Major Leibovitch is assigned to the Doctrinal Division, Futures Directorate, U.S. Army Intelligence Center and Fort Huachuca. Interested readers can reach him via E-mail at leibovitchh@huachuca-emh1.army.mil and telephonically at (520) 538-0971 and DSN 879-0971.*

# ASAS Master Analyst Program Sly Fox Den ASI 1F Notes

The U.S. Army Intelligence Center and Fort Huachuca Is offering a unique program formed to provide commanders with specially trained intelligence analysts (ASI "1F"). This program, the All-Source Analysis Systems (ASAS) Master Analyst Program (AMAP), is designed to meet the challenges of advanced automation and the demand of MI senior noncommissioned officers. A special branch at Fort Huachuca leads and coordinates all aspects of the program

Graduates having problems obtaining orders from their military personnel offices (MILPOs) for the ASI "1F" should attach a copy of the NOFC (Notification of Future Change to DA Pam 611-XX) Memorandum dated 15 July 1997. A copy is available on our web site. This is the interim authority until the new DA pamphlet listing the ASI is published.

Several field commanders have requested information concerning the ASI "1F". The most requested information was on the awarding of the ASI. The ASI is valid for 96B and 98C, Sergeant through Master Sergeant. The NOFC is not clear on this point. Please feel free to E-mail us with any further questions.

The two pilot courses were a complete success. The Student Evaluation Plan has been updated to reflect all the recommended changes from the students. The initial validation process was also a success. It must be emphasized that this course is very rigorous and is designed for maximum learning opportunity. The first official course graduated 17 April 1998. The next course starts in July 1998.

The basic task lists for ASAS are posted on our web site. (See URL http://138.27.202.66.) Prospective students to the course must be certified on one of these basic task lists. All source, single source and remote workstation basic task will be formally tested the second day of the course. Students must pass their special area basic test to continue in the course.

Congratulations are in order for some "sly foxes." Feedback from senior MI officers cited AMAC graduates as major contributors to mission success. Recent training events in Fort Hood, Japan, and Europe have highlighted the major contribution these personnel are making to the force. Great job!

The Defense Intelligence Agency is building a similar version of the ASAS Master Analyst Program and course. They are using the AMAP as a model to create a "Senior Analyst Program" for their top talent. Look for further developments in this area and we wish them well!

*Master Sergeant Michael Fallon is the Chief of the AMAP. For more information, readers can contact him via E-mail at amap@huachuca-emh1.army.mil, through the web page at http://138.27.202.66, or telephonically at (520) 533-4652 or DSN 821-4652.*

# PROPONENT NOTES

**OCMI Reorganization**. The Office of the Chief, Military Intelligence is now part of Futures Directorate and expanded to include Force Structure Division (formerly Master Plans Division of the Directorate of Combat Developments). Force Structure continues to be responsible for structure issues, including MI Force Structure Review and Design; Manpower and Requirements Criteria (MARC) studies on all MI MOS; and Total Army Analysis studies. They also oversee development of all MI Basis of Issue Plans (BOIP) for all Corps and below MI Systems and development of all MI Tables of Organization and Equipment (TO&E) for all corps and below organizations. Combining Force Structure into OCMI centralizes all personnel proponent functions with MI force structure development. This is especially crucial considering the ongoing personnel and structure related actions such as the Change in Non-Commissioned Officer Structure (CINCOS), Officer Personnel Management System (OPMS) XXI, Officer Restructuring, and Quadrennial Defense Review (QDR) initiatives.

**OPMS XXI**. Under OPMS XXI, MI Branch becomes part of the Operations Career Field. The Operations Career Field consists of all traditional branches as they currently exist. The major change to MI will be the deletion of Area of Concentration (AOC) 35B, Strategic Intelligence. The reserve component will retain 35B. Strategic Intelligence, in the active component will become Functional Area (FA) 34, part of the Information Operations Career Field.

**DA Pamphlet 600-3, Commissioned Officer Development and Career Management**, is being rewritten to reflect OPMS XXI changes. Expected publication is fall 1998. The DA PAM will reflect the requirement for all captains to have company command time for branch qualification. Majors aspiring for battalion command are strongly encouraged to have S3 or executive officer experience. For additional information on OPMS XXI see the PERSCOM Homepage ( www-perscom.army.mil) or the Army Homepage (www.army.mil/opms). Points of contact (POCs) for Military Intelligence are Captain Calvin Downey and Ms. Charlotte Borghardt, commercial (520) 533-1180/8, DSN 821-1180/8, or via E-mail downeyc@huachuca-emh1.army.mil or borghardtc@huachuca-emh1.army.mil.

**Functional Area 34, Strategic Intelligence.** FA 34 will provide the Army with professional intelligence analysts who are educated, trained and professionally developed to be world-class analysts. They will be repetitively assigned to positions requiring long-term background knowledge and study of specific geographic, political or demographic areas. These officers will be familiar with both Joint and Army Intelligence and Communications systems and procedures.

Under OPMS XXI, FA 34 is part of Information Operations (IO) Career Field. On designation into the IO Career Field and FA 34, officers will attend a transition course at Fort Huachuca and continue with the Postgraduate Intelligence Program at the Joint Military Intelligence College at Bolling Air Force Base. Point of contact is Ms. Borghardt (see above).

**National Systems Development Program (NSDP)**. The OCMI completed the staffing and submissions for assigning an additional skill identifier (ASI) 3F to the National Development Systems Program (NSDP) graduates. NSDP, sponsored by INSCOM, is a one year intensive professional development program that builds "space smart" officers for collection management positions, especially at corps, Army, joint, and national agency collection management elements. The POC is Captain Downey (see above).

**Project Warrior**. The United States Army Intelligence Center is pursuing more Project Warrior MI officers and noncommissioned officers as instructors and training and doctrine developers. The Project Warrior Program was created to spread the expertise developed by Combat Training Center (CTC) Observer/Controllers (O/C) to the rest of the force. Currently, the officers or noncommissioned officers who want to participate in the program are assigned to a CTC Operations Group with follow-on assignment to a Training and Doctrine Command (TRADOC) school (e.g., Fort Huachuca). Personnel who have interest in participating in the program should contact their assignment officer or career manager at the U.S. Total Army Personnel Command (PERSCOM). The POC is Captain Downey.

**Training Remedial Action Plan (T-RAP).** This action plan coordinates and directs TRADOC efforts to resolve recognized shortfalls in doctrine, training, organization, materiel, and leader development products. TRADOC tasks and assigns appropriate agencies for evaluating possible corrective actions.

The OCMI evaluated the ability of the OPM system to assign officers with proper training, background, and experience to S2 positions. As a result, OCMI has a questionnaire message in the field soliciting assessment of military intelligence officers' training, experience, and competence. Contact Captain Downey.

**Enlisted Career Management**. During this time of force change, getting involved in managing your career is necessary to meet your goals. This means keeping up with what is going on in the Army and within the Military Intelligence community. There are many tools available to help you to do this. OCMI opened its Internet site on the Huachuca Homepage in April 1998 (http://www.huachuca-dcd.army.mil/ocmi). We will use the site to keep you informed of what your Proponent Office is doing. We also solicit your input on current issues affecting the MI force. If you have questions or concerns you want to address to your Proponent Office, contact us at commercial (520) 533-1174, DSN 821-1174, or via E-mail atzsmi@huachuca-emh1.army.mil.

Another critical part of managing your career is keeping in touch with your Enlisted Branch Manager at the U.S. Total Army Personnel Command (PERSCOM). The MI Proponent Office works closely with PERSCOM to ensure that all MOSs have viable career paths and that professional development opportunities are available for all soldiers.

Your Branch Managers (see Figure 1 below), are there to assist you to meet your career goals and ensure proper and fair distribution of soldiers throughout the Army. Keep in mind that PERSCOM must maintain unit strengths worldwide. They will do their best to match vacant positions with the soldiers who want to fill those positions. Every soldier at every grade is vital to ensure unit readiness. Every soldier must actively participate in his or her career development and should expect to be treated with fairness and respect in doing so.

It is sometimes very difficult for soldiers overseas and in various time zones within the Continental United States to communicate with PERSCOM. PERSCOM Enlisted Personnel Management Directorate (EPMD) uses several means of communication to make the process easier. These include the Interactive Voice Response Telephone System (IVRS), expanded E-mail capabilities, high-speed fax machines, and mailgrams. No matter where you are stationed or what time of day it is, you can contact your MI Enlisted Branch Manager. Remember, it's your career!

**Warrant Officer Position Coding Update.** With the recent completion of the Change in NCO Structure (CINCOS) and the ongoing actions of the Officer Restructure Initiative (ORI), it is now time to look at the grading of Military Intelligence Warrant Officer positions. All warrant officer positions are curently graded by rank and should conform to the average

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**Figure 1. PERSCOM Branch Managers for MI MOSs.**

grade distribution matrix shown in Appendix G of **AR 611-112, Manual of Warrant Officer Military Occupational Specialties**. Our current MI warrant officer distribution has too many authorizations for W2 and W4 and too few for W3 and W5. We will be working this issue over the next several months to try to realign the overages and the shortages to bring them in line with desired force structure. The greatest challenge will be to reduce our W4 authorizations. This will have no affect on our actual inventory of warrant officers. We will review each TO&E and Table of Distribution and Allowances (TDA) for possible upgrades and downgrades. No current positions will be deleted and all actions will be coordinated with the appropriate MACOM. If you have any specific questions on MI warrant officer position coding, call Chief Warrant Officer Five Rex Williams, Warrant Officer Professional Development Manager at (520) 533-1183 and DSN 821-1183 or E-mail Williamsx@huachuca-emh1.army.mil.

**Officer Restructuring Initiative (ORI)**. The ORI is a joint DCSPER/TRADOC effort to reconcile the Army's TO&E officer requirements with DOPMA-constrained officer inventory by FY00. In effect, ORI calls for downgrades of some officer TO&E positions similar to the way that Change in Noncommissioned Officer Structure adjusted some NCO positions. TRADOC completed ORI Phase I in November 1997, and briefed the CSA in December 1997, recommending downgrades to Modified TO&E authorizations not TO&E requirements. The CSA agreed to delay his decision. TRADOC proceeded with ORI Phase II, which further defined the downgrade of 20% CPT requirements, 6% MAJ requirements, 12% LTC requirements, and 12% COL requirements. On 11 February 1998, USAIC&FH submitted to Force Design Directorate, Fort Leavenworth, a prioritized list of TO&E requirements for downgrade. This submission merged downgrades for the tactical Army with those proposed by INSCOM. TRADOC's Force Design Directorate will compile and analyze all input.

The POC is CPT Joel Rayburn at DSN 879-2275 or Commercial (520) 538-2275. His E-mail is rayburnp@huachuca-emh1.army.mil.

# QUICK TIPS

## Pace Count Measuring

**by 1SG Timothy J. Carroll, Jr.**

Military forces have used the pace count for a few thousand years to measure distance, and it continues to serve as a valid measurement method. Analysis and Control Element (ACE) and Analysis Control Team (ACT) NCOs can really benefit if they apply this simple method.

**Know the pace count of every part of your operation!** Knowing the pace count for an expanded M925A1 5-ton vehicle (6 by 12) is a key piece of information. Recording the pace count for all vehicles, power-cables, generators, camouflage spread, and tents in your operation can significantly reduce frustration and increase safety when laying out or setting up an operation (units may use different operational configurations of tents and/or vehicles due to changes in resources, mission, or terrain). It is important to develop a chart for each configuration, laying out the pace count for where each vehicle, tent, and generator is to be placed. Another important tip: know your cable length. Setting up a site only to find you need to move a generator over two more feet to get a cable to reach the system can be very frustrating! It is also good practice to verify the pace count once the operation is in place.

The configuration chart can reduce conflict during a site reconnaissance. Once you know the key starting point for your part of an operation, you can easily pace and stake the boundaries, followed up with the exact site for each piece of equipment. For instance, the division ACE, where I worked, normally linked into the other components of the Division Main Command Post at the rear left corner from the entrance. The G3 Sergeant Major would stake this point and give us some time to evaluate our site. We laid our operation 90 to 180 degrees from his point. We paced diagonally at 135 degrees (having previously paced our own operational footprint) and posted a stake at the far corner. Then we visualized the boundary lines. If we didn't have enough space, the G3 SGM made adjustments to the heart of the operation until we had the space we needed.

This simple, time proven method can make your operation more efficient while increasing safety. Try it.

First Sergeant Carroll is at the NCO Academy, Fort Huachuca, Arizona. You can contact him at (520) 533-4221, DSN 821-4221, and E-mail carrollt@huahcuca-emh1.armhy.mil.

# MI CORPS HALL OF FAME

The MI Corps Hall of Fame is inducting three new members for 1998. The ceremony will take place on 26 June 1998.

**Lieutenant General Paul E. Menoher, Jr. (Retired)**

LTG Menoher was an influential visionary and innovator throughout his career. He held a series of demanding positions of great responsibility during his 35 years of commissioned service, including Commanding General of the Army Intelligence Agency (AIA), CG of the United States Army Intelligence Center and Fort Huachuca (USAIC&FH), CG of the Army Intelligence and Security Command (INSCOM), and Army Deputy Chief of Staff for Intelligence (DCSINT).

As the AIA Commander, LTG Menoher provided outstanding leadership and direction to four operational intelligence production centers: trhe Intelligence and Threat Analysis Center; Foreign Science and Technology Center; Missile and Space Intelligence Center; and the Armed Forces Medical Intelligence Center. In his follow-on assignment as the Commanding General of USAIC&FH, LTG Menoher provided superb insight and vision in the development of new Army intelligence doctrine, organizational constructs, and intelligence collection and processing systems. In his assignment as the INSCOM CG, he ensured that responsive, tailored intelligence and force protection support was provided to Army and Joint Task Force commanders. He created the Land Information Warfare Activity, directed the effort that created the Army Intelligence Master Plan (AIMP), and refined the Intelligence Electronic Warfare systems requirements.

As the Army's Deputy Chief of Staff for Intelligence, LTG Menoher created and maintained a seamless intelligence architecture which links strategic, operational, and tactical forces at all levels for the best possible intelligence support. His knowledge of systems integration, coupled with the realities of ground combat, made him invaluable in developing, defining, and defending intelligence capabilities and structure. He was also the Army's leader in creating the prototype battlefield visualization capability for the XVIII Airborne Corps. This capability, when mature, will enable commanders to see their physical battlespace with the friendly and enemy forces dynamically arrayed in a high fidelity, three-dimensional, virtual replication.

LTG Menoher pioneered for the Civilian Personnel Proponency System for the Army, taking the lead for Training and Doctrine Command to fully integrate the civilian professional intelligence workforce into the Military Intelligence Corps. He directed the action to consolidate and create new enlisted military occupational specialties to leverage the superb qualities of MI soldiers, economize operations, and provide assignment flexibility across the force. He directed an independent MI officer structuring study that realigned the distribution of MI officers, ensuring key MI officer authorizations were filled with the right grades and specialties. As a forerunner in the Army for numerous language initiatives, he was most noted for the development of a new MOS for Interpreter/Translators in the Reserve Component.

LTG Menoher's vision for the MI Corps, systems architecture, and the inter-connectivity between the Services and national intelligence activities has ensured that the Corps is prepared to execute its role in support of Force XXI. Indeed, his battle cry, "One Vision----One Vector----One Voice!" was the driving influence behind the pursuit of excellence by our great Corps throughout the past decade. LTG Menoher has truly blazed a trail of excellence for the Military Intelligence Corps to ensure its viability and preparedness to meet the challenges of the new millennium.

**Command Sergeant Major Raymond McKnight (Retired)**

CSM McKnight's distinguished career spanned more than 33 years of devoted selfless service to soldiers. He held a variety of positions throughout his career from a Morse code operator serving on a low-level team with the infantry in the jungles of Vietnam,

an instructor, a first sergeant for nine years, a brigade CSM, to the demanding position of Command Sergeant Major of INSCOM.

As a young sergeant, he copied Morse code, provided perimeter security, and dug foxholes. He demonstrated that intelligence soldiers can fight and survive under any condition. As an instructor, he developed a Morse code head-start program that reduced student attrition. While CSM of Field Station Berlin from 1981 to 1986, CSM McKnight created a two-week classroom noncommissioned officer development plan (NCODP) and implemented the first reverse-readiness training (REDTRAIN) program with Field Station Berlin and V Corps MI units. His unit won many awards, including the Supply Discipline Award, Travis Trophy, and the Command Supply Maintenance of Excellence Award. As the CSM of the 704th MI Battalion, he laid the groundwork for the formation of the 743d MI Battalion. He also identified the critical skills needed for the expanding national training programs and was instrumental in coordinating soldier participation.

As the INSCOM CSM from 1987 to 1993, CSM McKnight developed, coordinated, and implemented policies and procedures for worldwide intelligence mission requirements. He provided advice and counsel on training policies, technical development in tactical and strategic units, and effective use of resources and MOS regarding intelligence mission requirements. CSM McKnight developed and managed the INSCOM Benefit Association, started by intelligence soldiers to assist themselves and their family members with the cost of civilian education. Many soldiers and family members received associates degrees—more than 500 received bachelors or masters degrees through this program. He then converted the fund into a college scholarship program to assist surviving family members.

CSM McKnight's leadership was pivotal in the success that the INSCOM soldiers and civilians achieved in support of the warfighters during Operations DESERT SHIELD/DESERT STORM. He directed a linguist recruitment and cross-training program and coordinated the assignment of chemical personnel to train NBC (nuclear, biological, chemical) skills before DESERT SHIELD/STORM deployment. He spearheaded the formulation of a family support system.

CSM McKnight's first rule—taking care of soldiers and their families—was evident throughout his distinguished career. He touched the lives of many and truly changed the Army's image of the MI Soldier. His contributions to the MI community and his keen ability to recognize the need for change benefited the intelligence community, the MI Corps, and the U.S. Army. CSM McKnight has proven he is "ALWAYS OUT FRONT," always!

## Colonel Seth F. Nottingham (Deceased)

From his first assignment as a Signals Intelligence Watch Officer, U.S. Army Field Station, Thailand, to his untimely death in 1997 during his tenure as the Director of Combat Developments, U.S. Army Intelligence Center and Fort Huachuca, Arizona, Colonel Nottingham served our country well. His great vision, ability to develop and embrace innovative concepts, and profound knowledge of Army operations significantly impacted MI and the U.S. Army. His other major duty assignments include commander of two detachments in Thailand; Signals Intelligence Officer, 504th Army Security Agency Group, Fort Carson, Colorado; Battlefield Systems Chief and Brigade S3, III Corps; and Executive Officer, 2d Armored Division, Fort Hood, Texas; Commander, 501st MI Battalion, Germany; Intelligence Plans and Training Officer for the Deputy Chief of Staff for Intelligence, Germany; and Deputy G2 for Plans and Operations, III Corps.

Colonel Nottingham made many significant contributions to MI while he served as the Director of Combat Developments. He led design of the Division XXI MI Battalion force structure that was used in the Division XXI Advanced Warfighting Experiments. He was a leading force in the publication of **TRADOC Pamphlet 525-75**, **Intelligence Training XXI**, and in the development of information operations doctrine that led to the **Intelligence Operations–Tactics, Techniques, and Procedures** (IO-TTP). His final effort was the development of the MI Functional Area Assessment, an overarching strategy for intelligence that will serve us well into the next decade.

Colonel Nottingham's vision for the future and superb leadership skills were critical factors in his participation of the MI force structure design. He was precisely the savvy, battlefield-focused, soldier-oriented leader we needed for 21st Century Army operations. His contributions to the MI community will continue to advance and define the MI soldier's role of tomorrow.

*Editors Note: In addition to welcoming the 1998 Hall of Fame inductees introduced above, **MIPB** presents a biography of First Lieutenant George Sisler, MI's only Medal of Honor winner.*

## First Lieutenant George Kenton Sisler (Deceased)

**HOF Inductee: 1988**

First Lieutenant George Kenton Sisler served in the U.S. Army National Guard from September 1956 to July 1957 and in the

Army Reserve from July 1957 to January 1958.

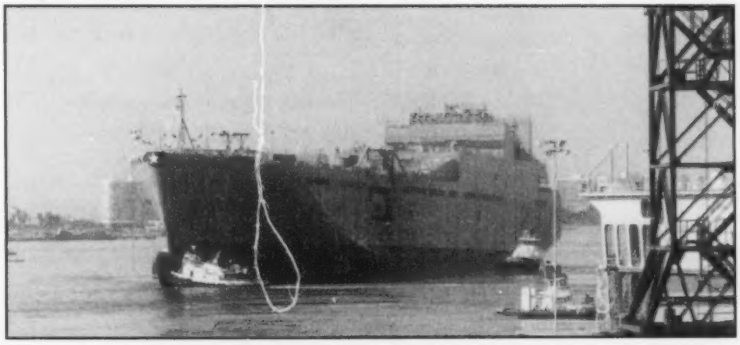
He performed active duty service as an enlisted soldier in the U.S. Air Force from January 1958 to May 1962 and in the Regular Army from August 1964 to June 1965. He was commissioned as a second lieutenant on 22 June 1965. As a first lieutenant, he served in Headquarters and Headquarters Company, 5th Special Forces Group (Airborne), 1st Special Forces.

1LT Sisler is military intelligence's only Medal of Honor winner. He was cited for this award for conspicuous gallantry and intrepidity at the risk of his life beyond the call of duty. 1LT Sisler was a platoon leader and advisor to a special U.S.-Vietnam exploitation force. A company-size enemy force attacked 1LT Sisler's platoon from three sides while it was on patrol deep within enemy-dominated territory. He quickly rallied his men, deployed them to a better defensive position, called for an air strike, and moved among his men to encourage and direct their efforts.

Learning that two men had been wounded and were unable to pull back to the perimeter, 1LT Sisler charged from the position through intense fire to assist them. He reached the men and, while carrying the first one back to the perimeter, came under more intense weapons fire by the enemy. Laying down his wounded comrade, he killed three onrushing enemy soldiers with rifle fire and silenced the enemy machine gun with a grenade. As he carried the wounded man to the perimeter, the left flank of the position received extremely heavy attack by the superior enemy force and several more men of his platoon were wounded. Despite the continuing enemy fire, 1LT Sisler was moving about the battlefield directing his force.

Realizing the need for instant action to prevent his position from being overrun, 1LT Sisler picked up some grenades and charged single-handed into the enemy onslaught, firing his weapon and throwing grenades. This singularly heroic action broke up the vicious assault and forced the enemy to begin withdrawing. His extraordinary leadership, infinite courage, and his selfless concern for his men saved the lives of many of his comrades. His actions reflected great credit upon himself and uphold the highest traditions of military service.

On 28 February 1998, there was a commissioning ceremony of U.S. Naval Ship (USNS) Sisler, a large medium-speed rollon-rolloff (LMSR) vessel. 1LT Sisler's widow christened the ship and several other members of his family participated in the ceremony, which took place at the National Steel and Shipbuilding Company in San Diego, California. The naming of a LMSR after Lieutenant Sisler is a fitting tribute to all military and civilian personnel who have played an important role in the history of military intelligence and have paid the supreme sacrifice in their service to the nation.



## CSM FORUM

*(Continued from page 3)*

civilians---and many others---are the reasons I chose to be a soldier rather than another possible career. They are also the reason why I am glad Staff Sergeant Zanders enlisted me for MI. They are in part responsible for all the sucess that I enjoy today. As I head toward the setting sun of my Army career, I see a bright star that will shine ever so brightly for the MI Corps.

The selection of Command Sergeant Major Scott Chunn, formerly the CSM of the 704th MI Brigade, as the new MI Corps CSM demonstrates Major General Charles Thomas' commitment to the future of our Corps. The values, standards, and professionalism that have served as the bedrock of our Noncommissioned Officer (NCO) Corps for more than 200 years are the same values, standards, and professionalism CSM Chunn possesses. He is the right soldier to protect the MI colors and to futher our reputation as the Army's leadership in technology. He is a visionary who will help shape the future. Major General Thomas has provided a stong voice and leadership in the growth of our Corps; CSM Chunn will join his team in building a stronger MI Corps for the future. Now, for the last time, I thank you so much for keeping MI...

ALWAYS OUT FRONT!

# TSM Notes

## The TRADOC System Manager Program

by Colonel Jerry V. Proctor

Welcome to the inaugural TSM Notes section. I am the new Training and Doctrine Command (TRADOC) System Manager (TSM) for the All-Source Analysis System (ASAS).

This represents the first article in what will be a regular contribution to the ***Military Intelligence Professional Bulletin***. We dedicate this TSM department to providing information on some of the major MI systems, including the All-Source Analysis System, often called the "Flagship of MI." The purpose of the articles is to facilitate information flow on activities, current use, innovations, planned events, and future requirements for these all-important MI systems.

As I travel worldwide, I often ask soldiers if they know what a TSM is or does. The answers vary and thus I feel it is important to clarify just what a TSM office does for you and for MI.

In this first article, I will tell you a little about the TSM system, the TSM ASAS Office, and its relationship to the user and the acquisition community. As you read further, I hope it will become clear why the TSMs are important to you.

### The Role of the TSM

TRADOC first began designating System Managers in the 1980s. According to **TRADOC PAM 71-9, Requirements Determination**, the role of a TSM is to—

- ☐ Serve as the users' representative.
- ☐ Refine materiel requirements (modify, coordinate, and defend material requirements in the operational requirements document (ORD)).
- ☐ Recommend establishment of an integrating concept team (ICT) to the Branch commandant.
- ☐ Participate in the material development system's concept analyses and cost performance trade-off analyses.
- ☐ Conduct, with the Material Developer, a crosswalk of the ORD and request for proposal (RFP).

Simply put, the TSM is the officially designated users' representative to TRADOC and to the acquisition system. There are several major elements involved in the birth and life of a system. The conception of a system begins with a user need, a bonafide requirement to support the combat commander's needs. After validation, the TSM submits the statement of these needs to the appropriate program manager (PM). The PM—an individual who is normally a member of the Acquisition Corps—has the authority and responsibility to let contracts with industry. With a manufacturer under contract, the PM monitors the building of the item. The Department of the Army (DA) Deputy Chief of Staff, Operations (DCSOPS) provides the money that the PM uses. This item competes with all other Army systems in an ever more challenging budget.

The entire acquisition process must operate on **valid** requirements. It is too big of a system for an individual user to just say, "Hey, I need a new widget." In the case of major systems, the TSM is responsible for documenting the requirement for the new item and produces the ORD Mission Needs Statement (MNS) and User Functional Description (UFD) for this purpose. These documents are the only documents the PM is allowed to use in building the future system—in essence, they become the "blue prints" of the future widget.

Before fielding this completed item to the user, the Army must test it. There is a whole community dedicated—under strict regulation by DA and Congress—to ensuring that a new system complies with the requirements it was built to meet. This is accomplished through a variety of technical and operational tests, and upon successful completion, a fielding decision is made. Then, with the help of both the PM and TSM, the Branch trains the users of the new system and fields the item to the user. The final element is the maintenance of the fielded system. In the case of ASAS, the U.S. Army Communications-Electronics Command (CECOM) Software Engineering Directorate maintains the software, and Tobyhanna Army Depot, Pennsylvania, is the hardware maintainer. This short explanation greatly oversimplifies the complex acquisition process and we will further elaborate it in future articles.

### The MI TSMs

With a major system like ASAS, the requirements that drive system development are the responsibility of the TRADOC System Manager. MI has four TSMs:

- ☐ TSM ASAS has the ASAS, all of its subsystems, and several joint interoperability subsystems.
- ☐ TSM Ground is responsible for the Ground-Based Common Sensors and the Advanced QUICKFIX.
- ☐ TSM Joint STARS (Joint Surveillance Target Attack Radar

System) is responsible for Army requirements for the Joint STARS collection platform (E-8) and its associated ground processor, the Common Ground Station (CGS).

- ☐ TSM UAV is responsible for the Army's tactical unmanned aerial vehicle effort and also serves as the requirements center for the Airborne Reconnaissance Low and Guardrail air-based systems.

## TSMs Need Your Input

The reason that it is important to you, the user, to know all the above information is that this is how new systems are developed, and you probably want a say in what this new system will do and how it will operate. The only way to do this is to communicate directly with your TSM. It is then the TSM's responsibility to evaluate this need or desire and incorporate it in to future requirements and design.

## Talk to Your TSMs

The moral of this first TSM article is that the TSM office, whether ASAS, Joint STARS, Ground, or UAV, is here to serve you, the system user. We represent you and want to provide you with the best system the Army can afford. We must communicate with you and you with us to ensure we do the best possible job in meeting your needs.

The TSM ASAS Office has a variety of ways of seeking your input. First, we are always available via telephone or E-mail. We have a new and active web site that I will describe in later articles, and there are at least two ASAS users' conferences annually where representatives from all the ASAS units provide updates, describe new uses, and present desires. Most effective is the good old-fashioned field visit. My goal is to visit each major ASAS site at least annually and I am on the road at least three weeks of every month. My staff and I will visit most sites many more times that that. Finally, you can visit the TSM office on beautiful "Old Post" Fort Huachuca.

Remember, we are working for you and represent you in the large complex acquisition world so help us to do our job better. You can contact the TSM ASAS telephonically at (520) 533-3504/7 or DSN 821-3504/7 and by E-mail at proctorj1@huachuca-emh1.army.mil (Colonel Jerry Proctor) or strackm@huachuca-emh1.army.mil (Deputy TSM Mike Strack).

# *MICA Scholarships—Making A Difference*

The Military Intelligence Corps Association (MICA) Scholarship Program, established in 1996 to promote opportunities for higher education and to help defray education costs, provides scholarships for the enlisted soldiers of the MI Corps, either on active duty or in the Reserve Component. This year, MICA awarded two $500 scholarships.

Applicants must meet the following criteria. First, they must be graduates of accredited high schools or possess general equivalency diploma (GED) certificates. They must have been accepted by institutions of higher learning (undergraduate college, university, or state-approved vocational program). Finally, the applicants must agree to maintain a three-credit hour schedule during an off-duty session.

Applicants need not be MICA members. All previous recipients may compete for subsequent awards.

Applications must include all of the following items:

- ☐ MICA scholarship application.
- ☐ Three letters of recommendation, two of which must be from the applicant's battalion commander and command sergeant major.
- ☐ One-page, single-spaced, computer-generated or typewritten essay detailing the applicant's educational goals.
- ☐ Memorandum from the applicant's unit education counselor attesting to the applicant's educational aptitude.
- ☐ Copies of all previous college, university, or vocational transcripts, copies of high school diplomas, or GED certificates.

MI soldiers who are interested in applying for a scholarship should request a "Scholarship Program Policies and Procedures Booklet," which provides instructions, an application form, and samples. You can request the booklet from and send applications to the MICA Scholarship Committee, P.O. Box 13020, Fort Huachuca, AZ 85670-3020. Applications cannot be accepted by E-mail or facsimile.

For more information, contact the new Scholarship Committee Chairperson, Lieutenant Colonel Mark Volk, via E-mail volk@mail.wizard.net or telephonically at (703) 493-1052 evenings (eastern time zone). Applications must be received no later than 31 May each year—plan now for 1999.

# RESERVE COMPONENT

**Warlord Notebook**. The U.S. Army National Guard (ARNG) and the U.S. Army Reserve (USAR) are both continuing to purchase Warlord Notebook (WLNB) systems as adjuncts to the All-Source Analysis System (ASAS). Approximately 175 systems are in the hands of Guard and Reserve MI units. These Reserve Component (RC) MI units are working closely with the Active Component (AC) units with whom they have training associations to insure they are properly configured and able to communicate. Units interested in persuing WLNB should contact Major Steve Ponder at the telephone, E-mail, or the postal address below.

**ASAS Remote Workstation Fielding**. The 39th Separte Infantry Brigade (SIB) (Arkansas ARNG) and the 53d SIB (Florida ARNG) are currently conducting ASAS-Remote Workstation (ASAS-RWS) initial fielding training at Fort Huachuca, Arizona. These units will receive follow-up visits from software support personnel periodically throughout the year. They will also have exercise support for their major training events. The Southeastern Army Reserve Intelligence Support Center (SE ARISC) is providing sustainment training for Guard units equipped with the ASAS-RWS. The point of contact (POC) for the SE ARISC and ASAS-RWS Sustainment Training is Chief Warrant Officer Four Mike Cuneo, (404) 362-3215.

**MI Battalions' TASS Summer Training**. Due to significant shortfalls in funding, instructors, and other resources, a significant portion of the scheduled training for MI battalions in the USAR Total Army School System will be cancelled this fiscal year. Concerns over this issue should be addressed to either Colonel John Craig or Major Steve Ponder.

**MI Officer Transition Course**. Officers in grades O-5 and above will not be permitted to attend the MI Officer Transition Course or Advanced Course (both AC and RC). This is to preclude assignment of unqualified officers against MI positions in the RC. The MI Officer Transition Course does not qualify a company grade officer as an MI officer; it prepares an officer to attend the MI Advanced Course.

**National Guard Intelligence Web Page**. There is an unofficial web page for Army National Guard intelligence at http://www.grafixgalore.com/ngintel/index.html. The page is an open forum for intelligence in the Guard and contains information on such things as training, dates for the Annual Guard G2/S2 Training Workshop, and doctrine issues relating to Guard intelligence units.

**Unit Addresses and E-mail**. We are currently seeking the postal and E-mail addresses of MI units in the Army Guard and Reserve. Recent turbulence in the force structure has rendered our database obsolete and we need the field's help in updating it. If you are in a Guard or Reserve MI unit that has either activated or moved in the last 18 months, please E-mail the full unit mailing address, commercial and DSN telephone numbers to us at ponders@huachuca-emh1.army.mil, with a subject line that reads: **Unit Address Update**.

**POC List**. Figure 1 is a list of some important MI POCs in the Guard and Reserve. The USAIC&FH is the U.S. Army Intelligence Center and Fort Huachuca and FORSCOM is the U.S. Army Forces Command.

**RC E-Mail**. If you are a Guard, Reserve, or AC MI soldier with an interest in RC issues, send us your E-mail address. We often retransmit any items we feel are of value to the RC MI community. The volume of material we send out this way is too great for traditional paper distribution so we cannot honor requests for hardcopies of any of this material. Please send your E-mail request to ponders@huachuca-emh1.army.mil, subject: **RC E-mail Distribution**.

| | |
|---|---|
| ARNG Liaison Sergeant Major to USAIC&FH, SGM Linda Bucklin | (520) 533-4212 |
| USAR Liaison SGM to USAIC&FH, SGM Clark Sullins | (520) 533-1177 |
| National Guard Bureau, ARO-IS, MAJ Steve Wilson | (703) 607-7354 |
| U.S. Army Reserve Command DCSINT LTC Mark Widmer | (404) 464-8424 |
| FORSCOM ARNG Advisor, MAJ Eunice Paxtot | (404) 669-5052 |
| FORSCOM USAR Advisor, MAJ Lou Elledge | (404) 669-7044 |

**Figure 1. Guard and Reserve Points of Contact.**

*Colonel John Craig is the USAR POC and the Chief of the Reserve Forces Office. Readers can contact him at (520) 522-1176, DSN 821-1176, and by E-mail at craigj@huachuca-emh1.army.mil.*

*Major Steve Ponder is the ARNG POC; his telephone number is (520) 533-1177 or DSN 821-1177 and his E-mail is shown above. Their FAX number is (520) 533-1762 and their mailing address is Commander, USAIC&FH, ATTN: ATZS-RA, Fort Huachuca, AZ 85613-6000.*



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# 344th MI Battalion

*The design of the unit crest is characterized by a gold-colored metal and enamel device consisting of a gold key, slanted upward to right behind the shafts of two pikes; all encircled by a continuous oval-shaped scroll passing through the bow of the key, behind the pike heads, keyward and over the pike staffs, and bearing the inscription in black enamel letters "Silent Sentinel." The key, symbol for security and secrecy, and the pikes, weapons used by sentries in Middle Ages, symbolize the basic mission of the organization. The shape of the bow of the key and the two pikes further simulate the numerical designation of the organization.*


On 25 March 1966, the Army Security Agency Training Center and School, Fort Devens, Massachusetts, organized the Army Detachment at Goodfellow Air Force Base, San Angelo, Texas. The detachment's authorized commissioned officer, warrant officer, and 23 enlisted soldiers taught electronic warfare intercept and translation skills to Army personnel beginning on 9 April of that year.

In the latter days of 1975, Army training at Goodfellow increased dramatically when the radio communications analysis and cryptanalysis courses of instruction began. Mid-1976 marked the start of STREAMLINER automated communications maintenance and operator training.

Designated as the U.S. Army Intelligence Training Battalion on 1 June 1983, the Goodfellow Detachment had more than 600 assigned soldiers. The unit comprised a headquarters section and two letter companies ("A" and "B"), resulting in the inclusion of soldierization training for all soldiers attending cryptologic training.

The battalion became the 3d Battalion, 2d School Brigade, on 15 January 1987, and was resubordinated to the 112th Military Intelligence Brigade, Fort Devens, Massachusetts. On 25 May 1990, the battalion was redesignated the 344th Military Intelligence Battalion, 112th MI Brigade (Training). The beginning of fiscal year 1993 saw the subordination of the 344th MI Battalion change from the 112th MI Brigade (Training), Fort Devens, to the 111th MI Brigade, Fort Huachuca, Arizona.

In addition to the primary mission of training MI linguists (98G), analysts (98C), intermediate-level imagery analysts (96D), and Army-engineer firefighters (51M), the 344th MI Battalion has supported numerous additional missions, including Operations JOINT ENDEAVOR and JOINT GUARD. On 20 July 1992, the 344th MI Battalion's commitment to excellence was recognized with the Army Superior Unit Award.

Today, the 344th Military Intelligence Battalion stands committed to send the gaining units the most thoroughly trained and highly motivated soldiers possible. Through professional noncommissioned and commissioned officers, today's soldiers carry the necessary tools to take them into the 21st Century.

**SILENT SENTINEL!**

**Commander**
**U. S. Army Intelligence Center & Fort Huachuca**
**ATZS-CLM (12)**
**Fort Huachuca, AZ 85613-6000**

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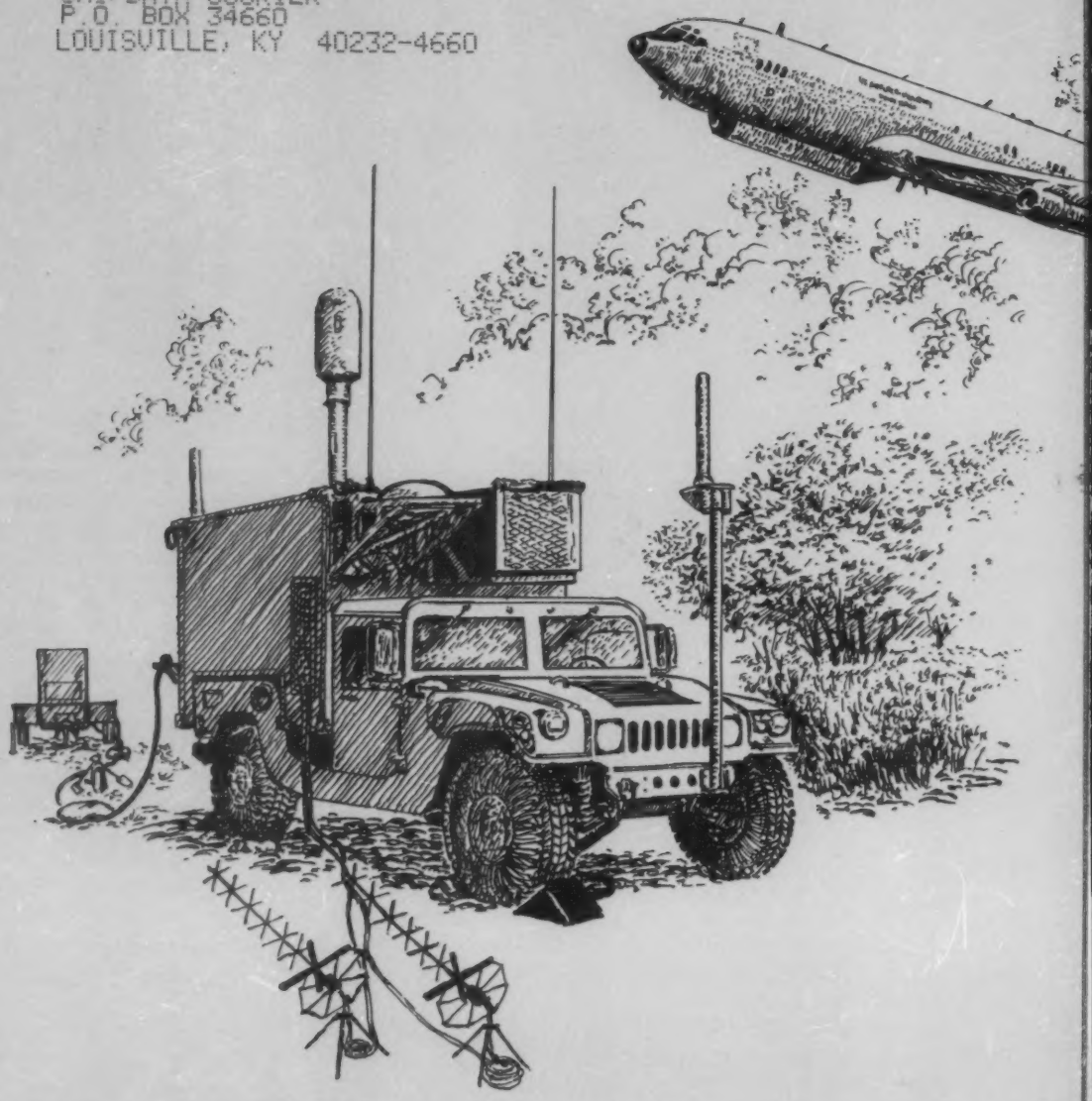

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